Pantheon Report

Generated at 2019-05-30 13:26:02 (UTC).

Data path: India on em1 (*remote*) →AWS India 1 on ens5 (*local*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.
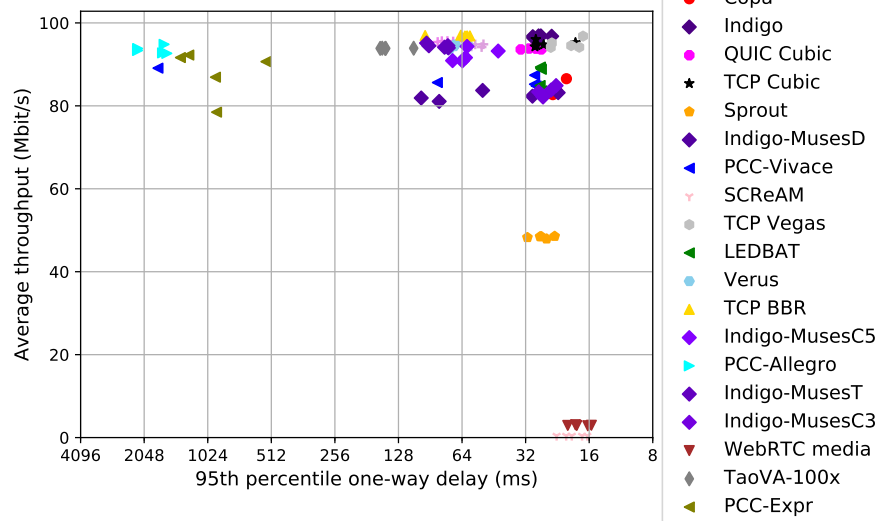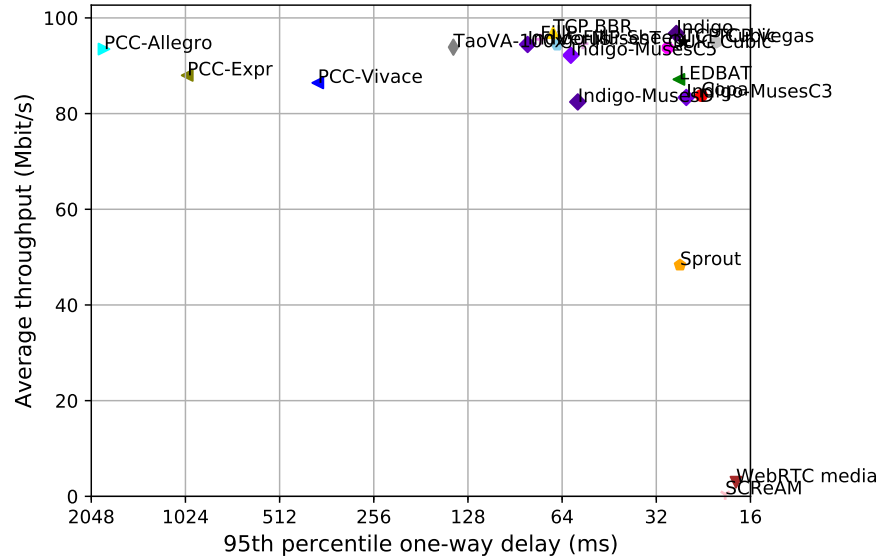
```
System info:
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from India to AWS India 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from India to AWS India 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	58.37	44.45	26.96	45.56	97.09	194.00	1.77	1.78	2.25
Copa	5	50.14	35.31	30.51	23.68	22.27	21.44	0.04	0.14	0.24
TCP Cubic	5	58.57	37.35	34.74	25.98	26.45	26.40	0.07	0.14	0.37
FillP	5	58.87	41.48	27.25	51.47	86.08	79.29	0.16	3.71	3.84
FillP-Sheep	5	58.11	39.88	29.97	49.61	59.96	59.37	0.13	0.29	0.43
Indigo	5	57.82	38.04	41.56	27.41	27.64	26.38	0.09	0.20	0.31
Indigo-MusesC3	5	55.86	34.03	20.79	25.32	25.41	26.24	0.04	0.12	0.42
Indigo-MusesC5	5	54.85	42.53	36.53	50.85	58.68	64.28	0.35	0.89	3.02
Indigo-MusesD	5	50.83	39.62	23.00	45.43	51.38	32.63	0.33	0.45	0.34
Indigo-MusesT	5	60.17	41.17	28.39	75.03	70.21	84.24	0.75	0.94	2.98
LEDBAT	5	52.28	37.39	30.04	26.50	27.78	29.07	0.09	0.16	0.39
PCC-Allegro	5	59.79	39.80	22.00	1874.10	1173.52	27.80	13.61	9.44	0.36
PCC-Expr	5	56.89	33.87	26.02	926.38	726.40	185.98	21.16	6.89	2.74
QUIC Cubic	5	58.05	38.97	29.59	29.21	28.07	43.79	0.10	0.20	0.52
SCReAM	5	0.21	0.21	0.22	19.29	18.80	18.81	0.08	0.19	0.35
Sprout	5	24.42	24.17	23.78	26.42	26.80	27.36	0.09	0.15	0.30
TaoVA-100x	5	58.50	39.38	27.56	96.00	145.04	177.83	0.44	1.11	2.67
TCP Vegas	5	59.14	36.77	34.11	20.46	19.92	21.15	0.08	0.12	0.27
Verus	5	57.64	40.81	28.92	65.94	62.89	144.33	0.20	0.50	0.83
PCC-Vivace	5	57.91	33.36	19.19	392.23	86.48	67.76	1.32	0.80	0.58
WebRTC media	5	1.57	0.92	0.47	17.58	17.67	18.13	0.14	0.58	0.90

```
Run 1: Statistics of TCP BBR

Start at: 2019-05-30 11:04:01
End at: 2019-05-30 11:04:31
Local clock offset: 3.218 ms
Remote clock offset: 0.566 ms


# Below is generated by plot.py at 2019-05-30 13:13:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 58.772 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 48.953 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 48.33 Mbit/s
95th percentile per-packet one-way delay: 93.616 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 170.954 ms
Loss rate: 2.79%
```
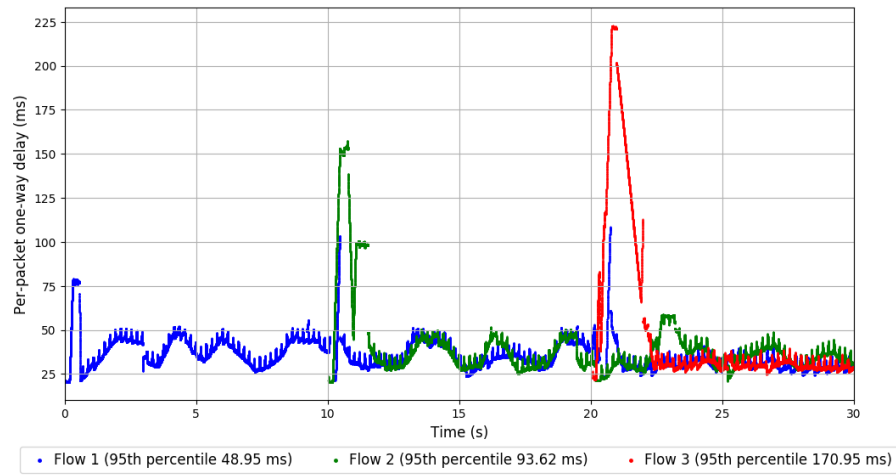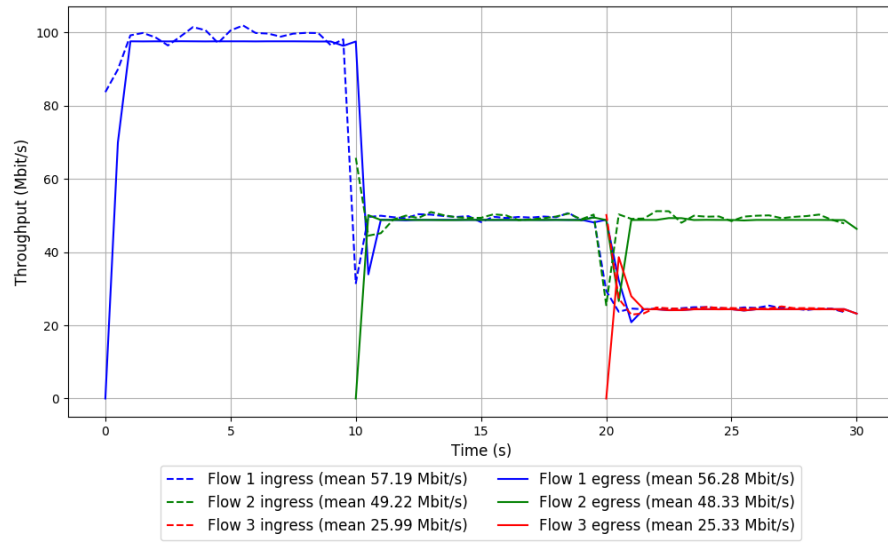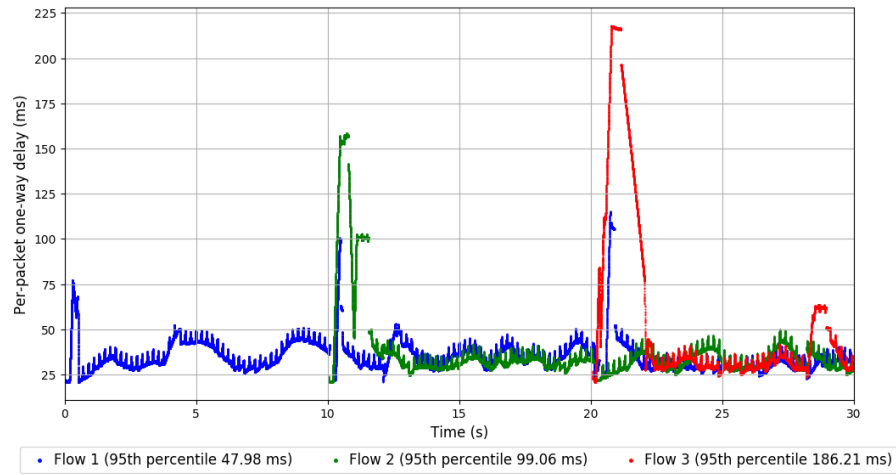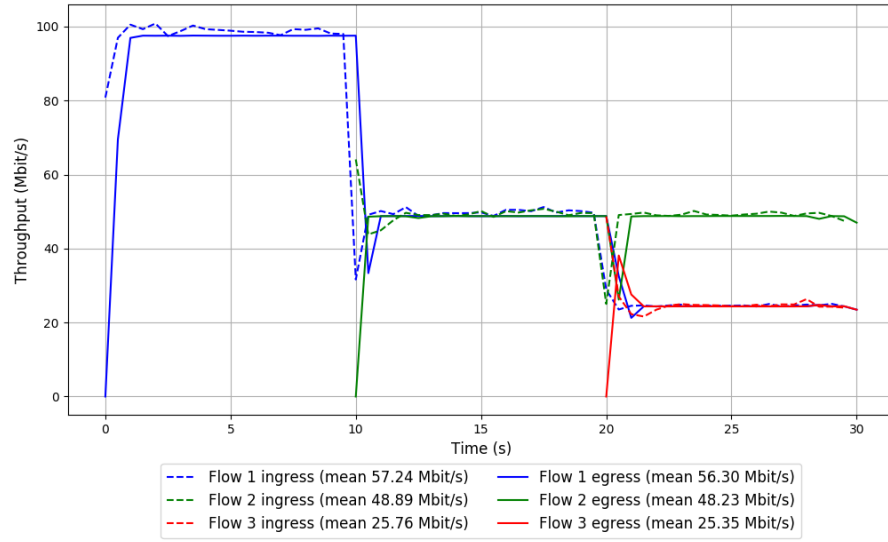
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 57.19 Mbit/s) — — — Flow 1 egress (mean 56.28 Mbit/s)
Flow 2 ingress (mean 49.22 Mbit/s) — — — Flow 2 egress (mean 48.33 Mbit/s)
Flow 3 ingress (mean 25.99 Mbit/s) — — — Flow 3 egress (mean 25.33 Mbit/s)

Flow 1 (95th percentile 48.95 ms)   Flow 2 (95th percentile 93.62 ms)   Flow 3 (95th percentile 170.95 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-05-30 11:31:25
End at: 2019-05-30 11:31:55
Local clock offset: -3.777 ms
Remote clock offset: 0.065 ms


# Below is generated by plot.py at 2019-05-30 13:13:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 64.871 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 58.88 Mbit/s
95th percentile per-packet one-way delay: 40.650 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 40.75 Mbit/s
95th percentile per-packet one-way delay: 95.440 ms
Loss rate: 1.81%
-- Flow 3:
Average throughput: 33.19 Mbit/s
95th percentile per-packet one-way delay: 163.662 ms
Loss rate: 2.53%
```

Run 2: Report of TCP BBR — Data Link
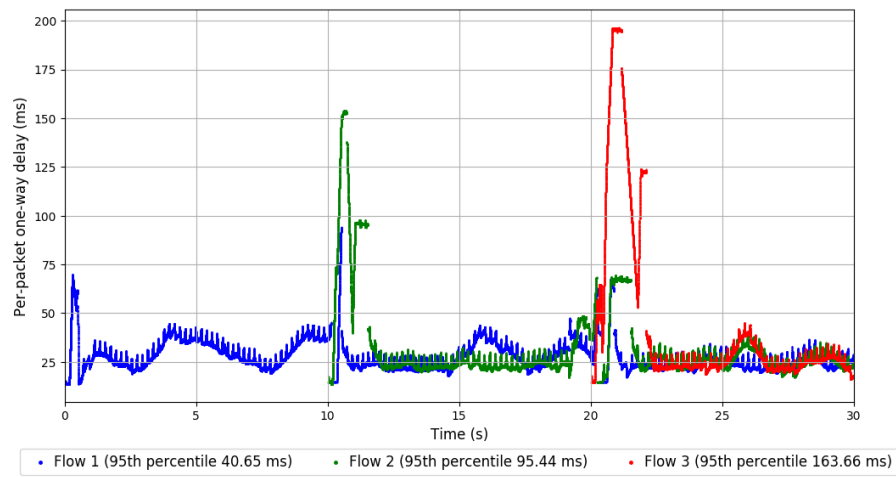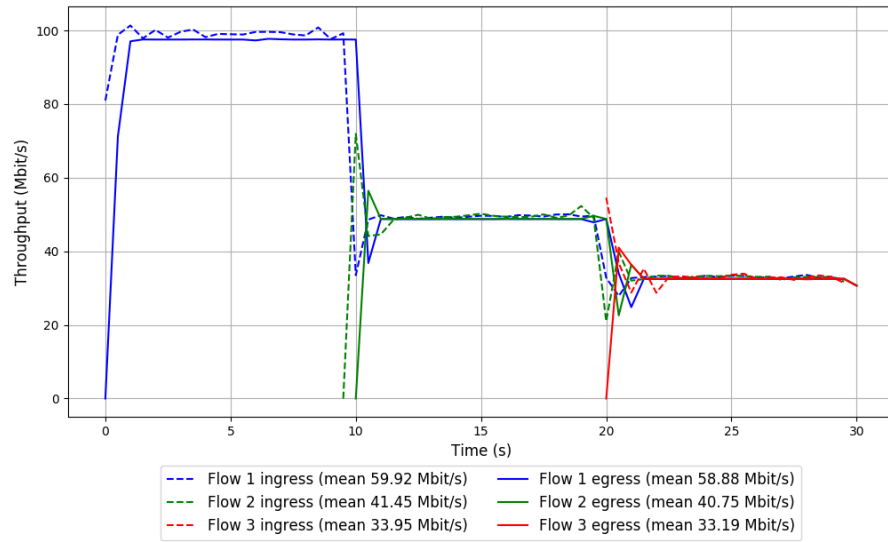
```
Run 3: Statistics of TCP BBR

Start at: 2019-05-30 11:59:02
End at: 2019-05-30 11:59:32
Local clock offset: 3.425 ms
Remote clock offset: -3.656 ms


# Below is generated by plot.py at 2019-05-30 13:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.83 Mbit/s
95th percentile per-packet one-way delay: 62.020 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 56.30 Mbit/s
95th percentile per-packet one-way delay: 47.985 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 48.23 Mbit/s
95th percentile per-packet one-way delay: 99.065 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 25.35 Mbit/s
95th percentile per-packet one-way delay: 186.208 ms
Loss rate: 1.88%
```
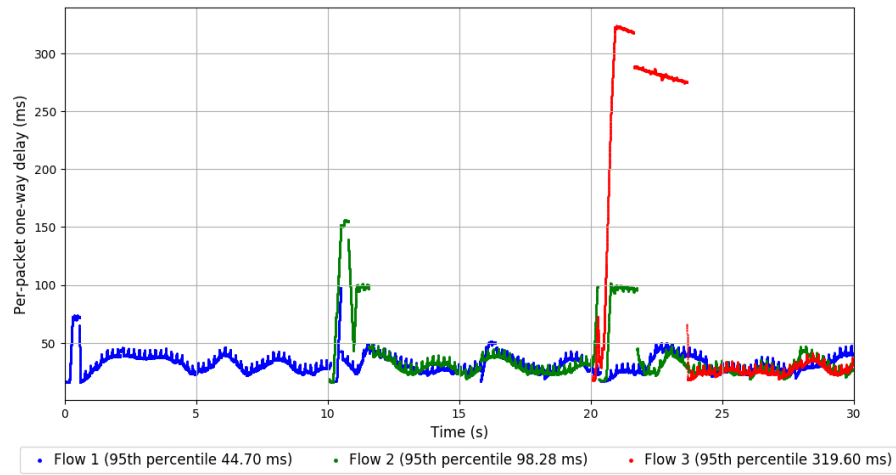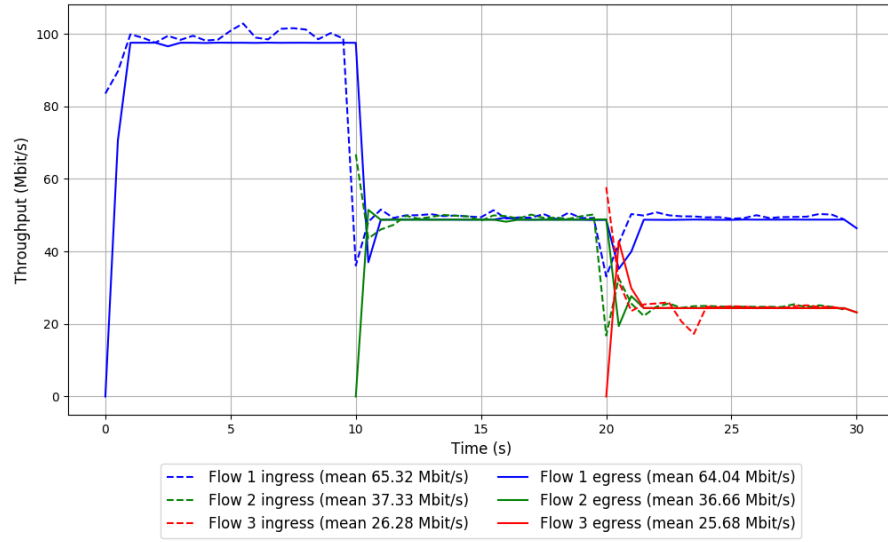
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 57.24 Mbit/s) --- Flow 1 egress (mean 56.30 Mbit/s)
Flow 2 ingress (mean 48.89 Mbit/s) --- Flow 2 egress (mean 48.23 Mbit/s)
Flow 3 ingress (mean 25.76 Mbit/s) --- Flow 3 egress (mean 25.35 Mbit/s)

Flow 1 (95th percentile 47.98 ms)   Flow 2 (95th percentile 99.06 ms)   Flow 3 (95th percentile 186.21 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-05-30 12:25:34
End at: 2019-05-30 12:26:04
Local clock offset: 3.636 ms
Remote clock offset: -4.88 ms


# Below is generated by plot.py at 2019-05-30 13:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 60.591 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 56.36 Mbit/s
95th percentile per-packet one-way delay: 45.496 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 48.26 Mbit/s
95th percentile per-packet one-way delay: 99.061 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 25.26 Mbit/s
95th percentile per-packet one-way delay: 129.561 ms
Loss rate: 1.45%
```

Run 4: Report of TCP BBR — Data Link
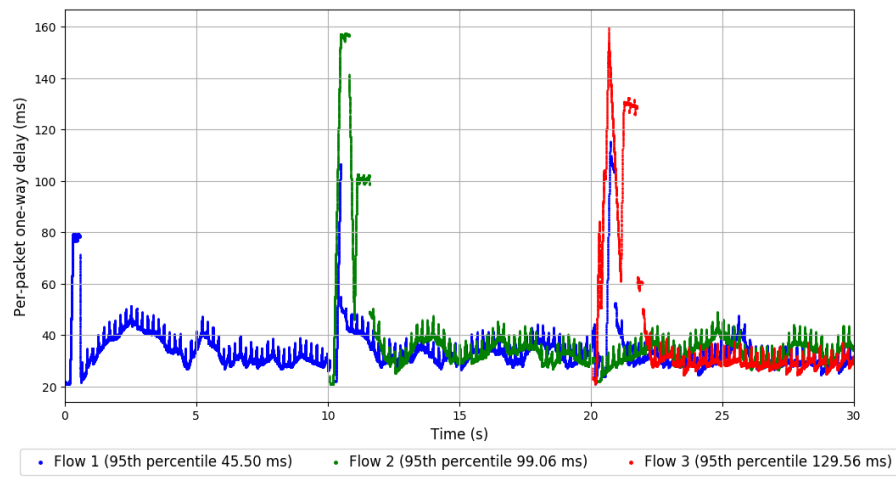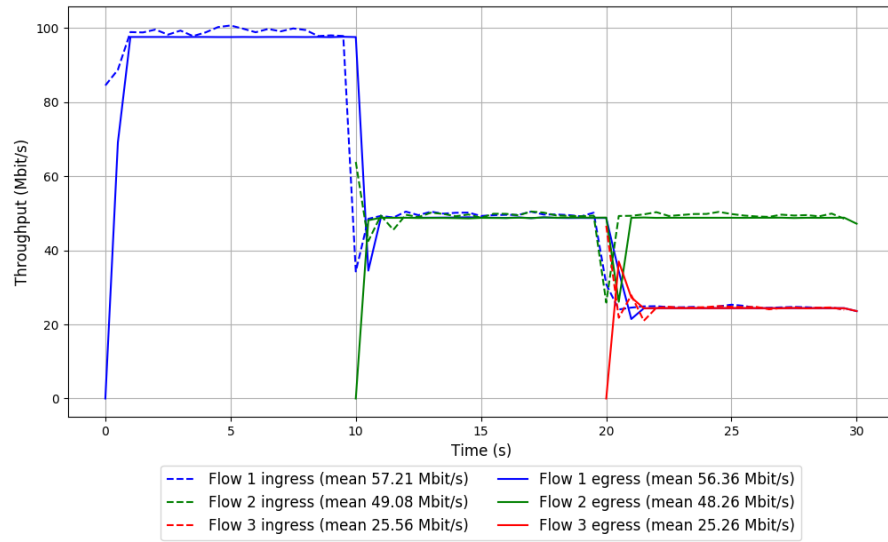
```
Run 5: Statistics of TCP BBR

Start at: 2019-05-30 12:53:09
End at: 2019-05-30 12:53:39
Local clock offset: -2.948 ms
Remote clock offset: -6.636 ms


# Below is generated by plot.py at 2019-05-30 13:13:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.96 Mbit/s
95th percentile per-packet one-way delay: 95.683 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 64.04 Mbit/s
95th percentile per-packet one-way delay: 44.700 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 36.66 Mbit/s
95th percentile per-packet one-way delay: 98.278 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 25.68 Mbit/s
95th percentile per-packet one-way delay: 319.596 ms
Loss rate: 2.60%
```
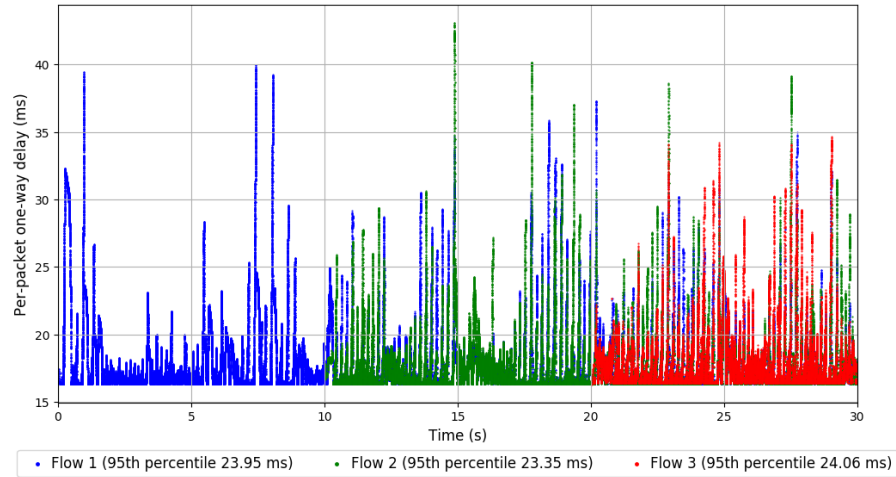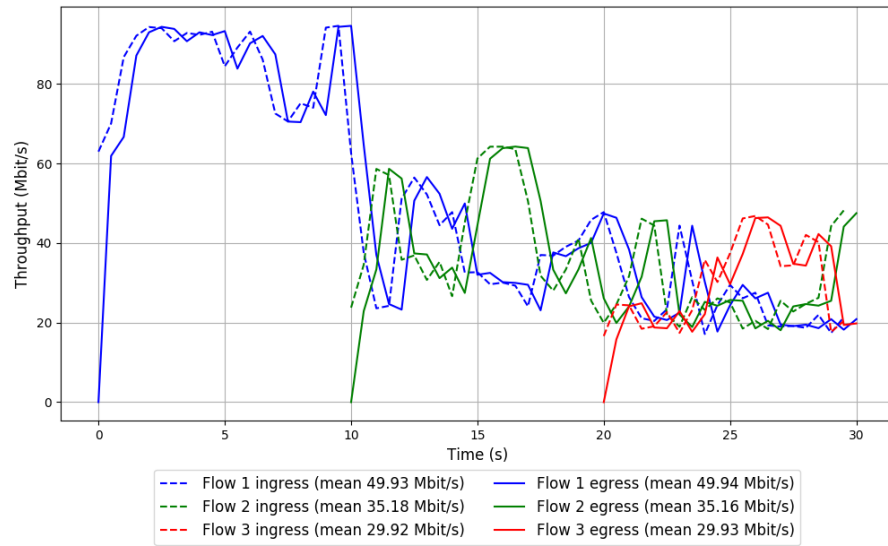
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 65.32 Mbit/s) — — — Flow 1 egress (mean 64.04 Mbit/s)
Flow 2 ingress (mean 37.33 Mbit/s) — — — Flow 2 egress (mean 36.66 Mbit/s)
Flow 3 ingress (mean 26.28 Mbit/s) — — — Flow 3 egress (mean 25.68 Mbit/s)

Flow 1 (95th percentile 44.70 ms) • Flow 2 (95th percentile 98.28 ms) • Flow 3 (95th percentile 319.60 ms)
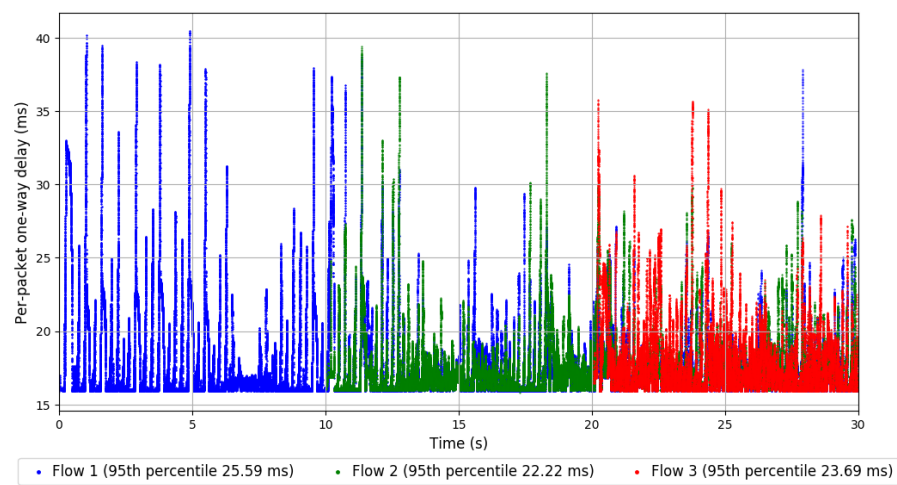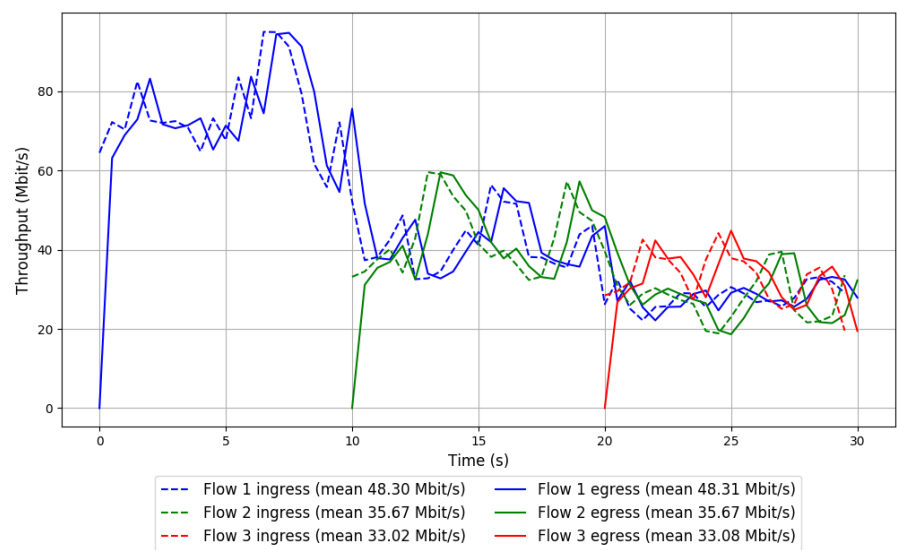
```
Run 1: Statistics of Copa

Start at: 2019-05-30 10:59:15
End at: 2019-05-30 10:59:45
Local clock offset: -1.035 ms
Remote clock offset: 0.392 ms


# Below is generated by plot.py at 2019-05-30 13:13:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.29 Mbit/s
95th percentile per-packet one-way delay: 23.817 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 49.94 Mbit/s
95th percentile per-packet one-way delay: 23.947 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 23.348 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 29.93 Mbit/s
95th percentile per-packet one-way delay: 24.057 ms
Loss rate: 0.21%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 49.93 Mbit/s) --- Flow 1 egress (mean 49.94 Mbit/s)
Flow 2 ingress (mean 35.18 Mbit/s) --- Flow 2 egress (mean 35.16 Mbit/s)
Flow 3 ingress (mean 29.92 Mbit/s) --- Flow 3 egress (mean 29.93 Mbit/s)

Flow 1 (95th percentile 23.95 ms)   Flow 2 (95th percentile 23.35 ms)   Flow 3 (95th percentile 24.06 ms)
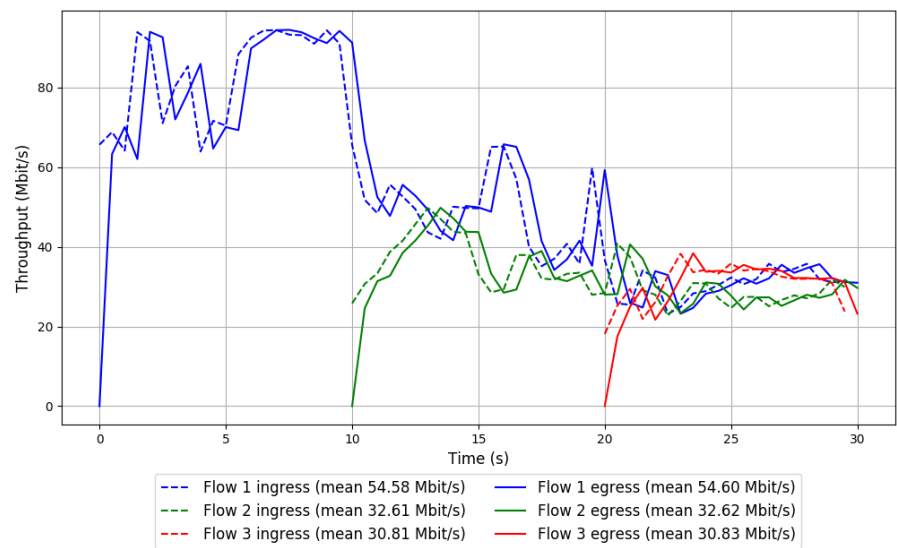
```
Run 2: Statistics of Copa

Start at: 2019-05-30 11:26:30
End at: 2019-05-30 11:27:00
Local clock offset: -3.02 ms
Remote clock offset: -1.232 ms


# Below is generated by plot.py at 2019-05-30 13:13:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.04 Mbit/s
95th percentile per-packet one-way delay: 24.124 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 48.31 Mbit/s
95th percentile per-packet one-way delay: 25.593 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 22.223 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 33.08 Mbit/s
95th percentile per-packet one-way delay: 23.694 ms
Loss rate: 0.09%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-05-30 11:54:07
End at: 2019-05-30 11:54:37
Local clock offset: -1.455 ms
Remote clock offset: -1.738 ms


# Below is generated by plot.py at 2019-05-30 13:13:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.55 Mbit/s
95th percentile per-packet one-way delay: 20.506 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 54.60 Mbit/s
95th percentile per-packet one-way delay: 21.142 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 32.62 Mbit/s
95th percentile per-packet one-way delay: 19.492 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 30.83 Mbit/s
95th percentile per-packet one-way delay: 18.941 ms
Loss rate: 0.20%
```
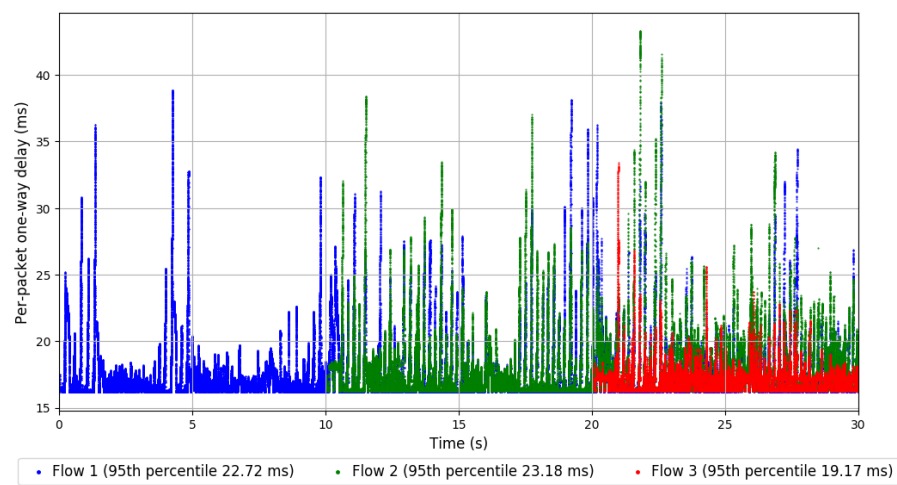
Run 3: Report of Copa — Data Link
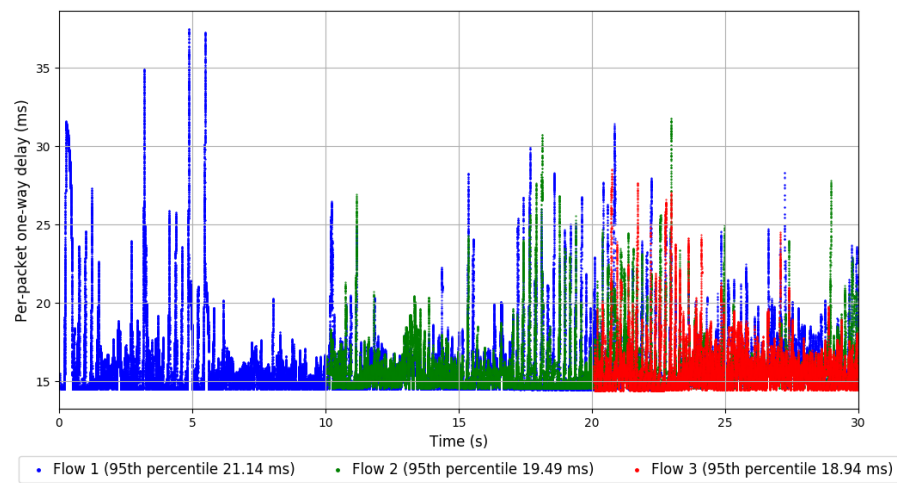
```
Run 4: Statistics of Copa

Start at: 2019-05-30 12:20:43
End at: 2019-05-30 12:21:13
Local clock offset: -1.148 ms
Remote clock offset: -4.158 ms


# Below is generated by plot.py at 2019-05-30 13:14:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.71 Mbit/s
95th percentile per-packet one-way delay: 23.796 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 48.47 Mbit/s
95th percentile per-packet one-way delay: 24.986 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.26 Mbit/s
95th percentile per-packet one-way delay: 23.087 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 21.345 ms
Loss rate: 0.40%
```
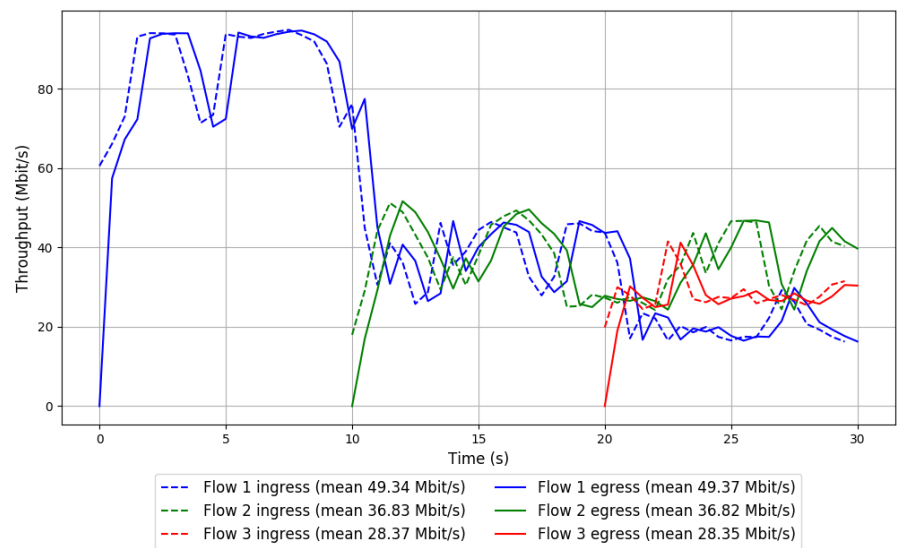
Run 4: Report of Copa — Data Link
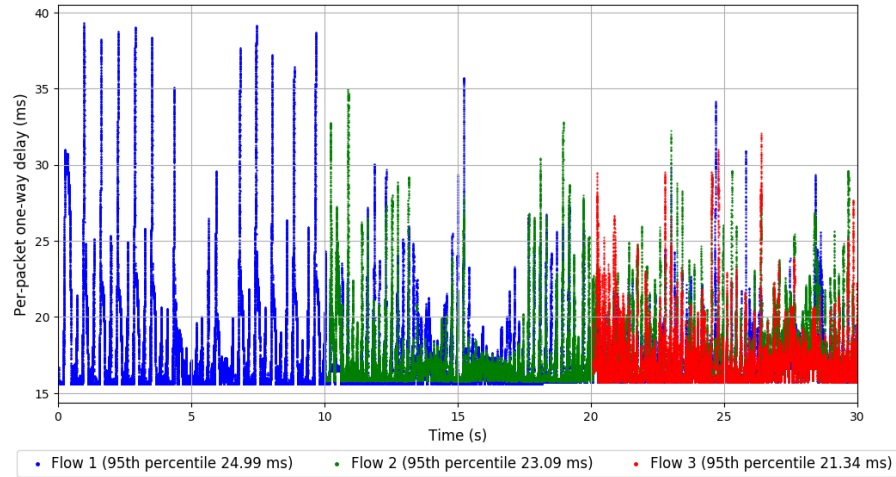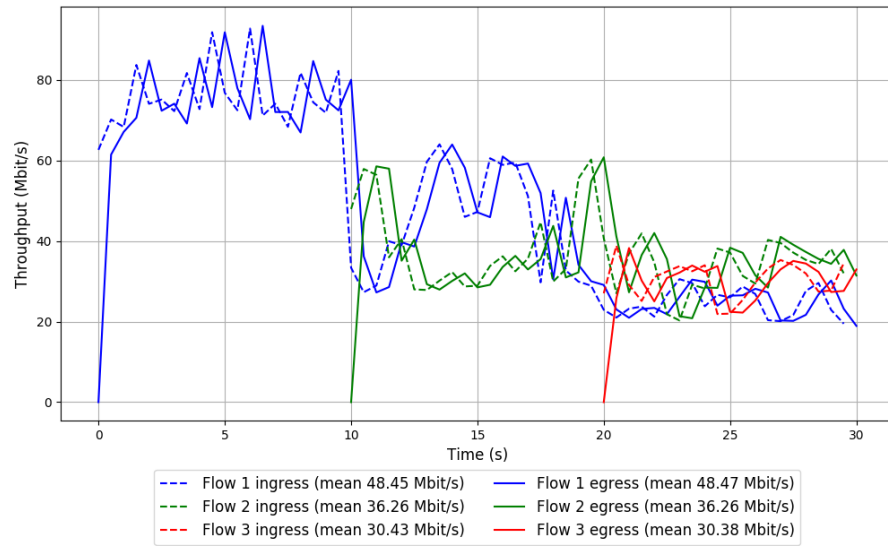
```
Run 5: Statistics of Copa

Start at: 2019-05-30 12:48:08
End at: 2019-05-30 12:48:38
Local clock offset: -2.554 ms
Remote clock offset: -6.372 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.31 Mbit/s
95th percentile per-packet one-way delay: 22.572 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 49.37 Mbit/s
95th percentile per-packet one-way delay: 22.716 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 23.178 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 28.35 Mbit/s
95th percentile per-packet one-way delay: 19.174 ms
Loss rate: 0.32%
```
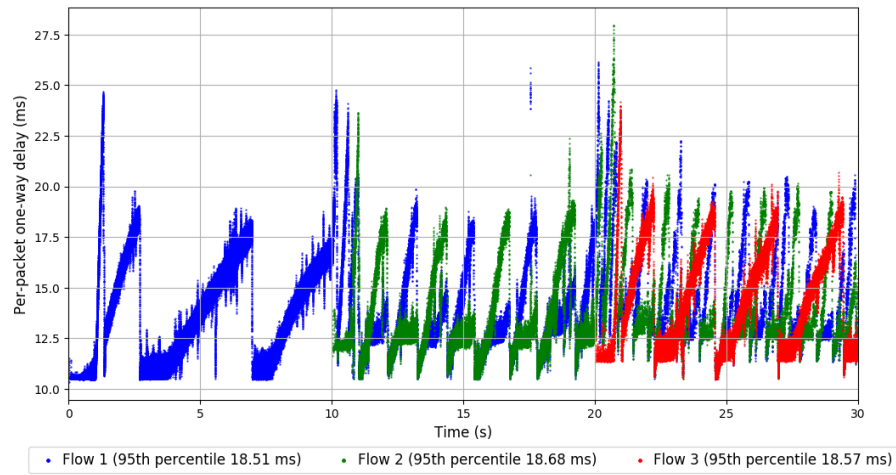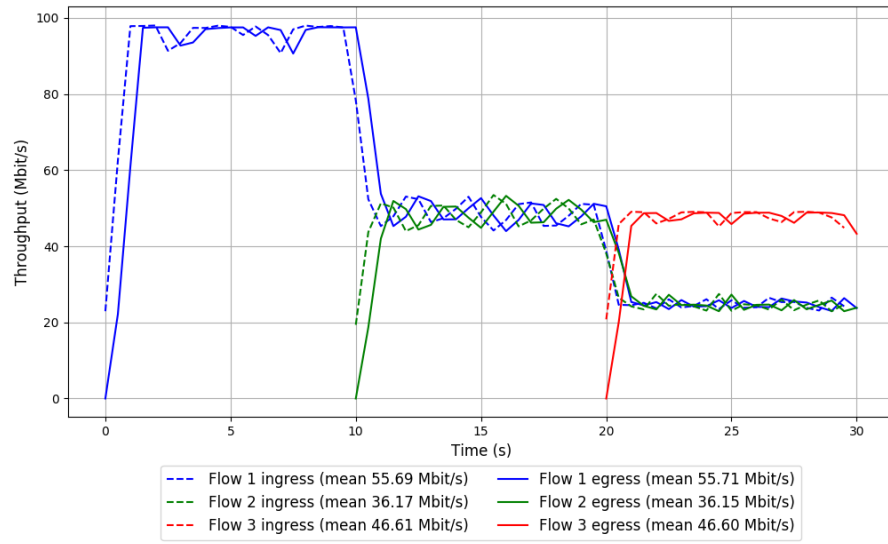
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 49.34 Mbit/s)   Flow 1 egress (mean 49.37 Mbit/s)
Flow 2 ingress (mean 36.83 Mbit/s)   Flow 2 egress (mean 36.82 Mbit/s)
Flow 3 ingress (mean 28.37 Mbit/s)   Flow 3 egress (mean 28.35 Mbit/s)

Flow 1 (95th percentile 22.72 ms)   Flow 2 (95th percentile 23.18 ms)   Flow 3 (95th percentile 19.17 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 11:18:35
End at: 2019-05-30 11:19:05
Local clock offset: -10.214 ms
Remote clock offset: -2.645 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.26 Mbit/s
95th percentile per-packet one-way delay: 18.582 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 55.71 Mbit/s
95th percentile per-packet one-way delay: 18.513 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 36.15 Mbit/s
95th percentile per-packet one-way delay: 18.680 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 46.60 Mbit/s
95th percentile per-packet one-way delay: 18.565 ms
Loss rate: 0.29%
```
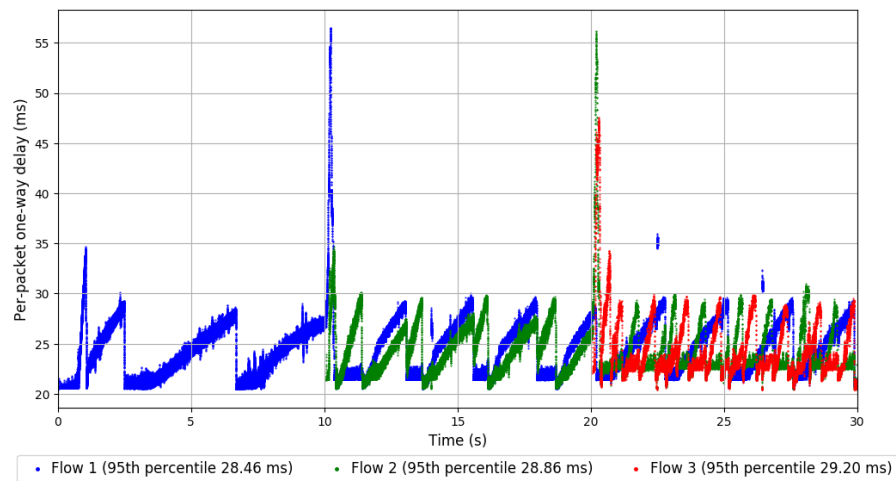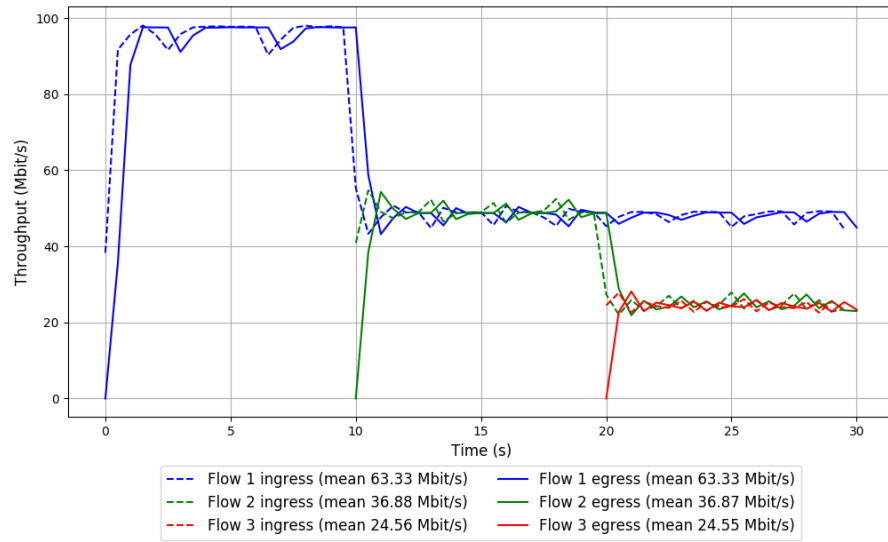
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 55.69 Mbit/s) Flow 1 egress (mean 55.71 Mbit/s)
Flow 2 ingress (mean 36.17 Mbit/s) Flow 2 egress (mean 36.15 Mbit/s)
Flow 3 ingress (mean 46.61 Mbit/s) Flow 3 egress (mean 46.60 Mbit/s)

Flow 1 (95th percentile 18.51 ms) Flow 2 (95th percentile 18.68 ms) Flow 3 (95th percentile 18.57 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 11:45:53
End at: 2019-05-30 11:46:23
Local clock offset: -0.934 ms
Remote clock offset: -3.981 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.74 Mbit/s
95th percentile per-packet one-way delay: 26.300 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 62.15 Mbit/s
95th percentile per-packet one-way delay: 25.994 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 26.889 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 24.48 Mbit/s
95th percentile per-packet one-way delay: 27.039 ms
Loss rate: 0.56%
```
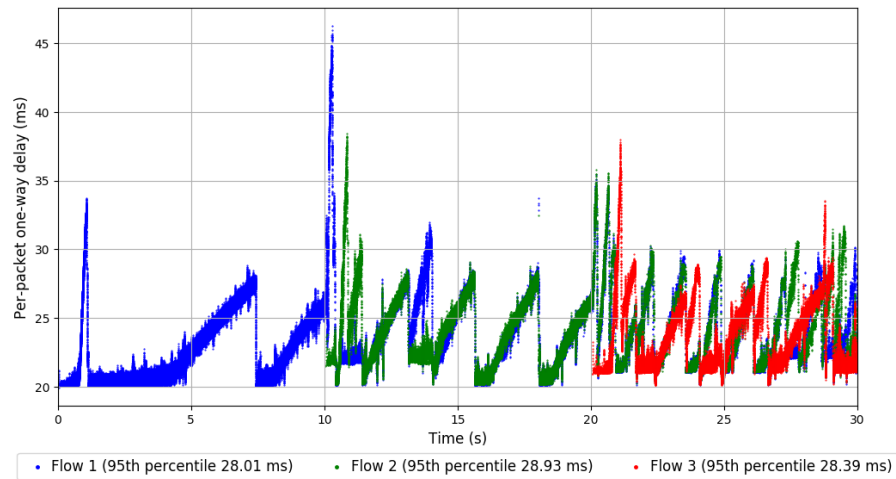
Run 2: Report of TCP Cubic — Data Link
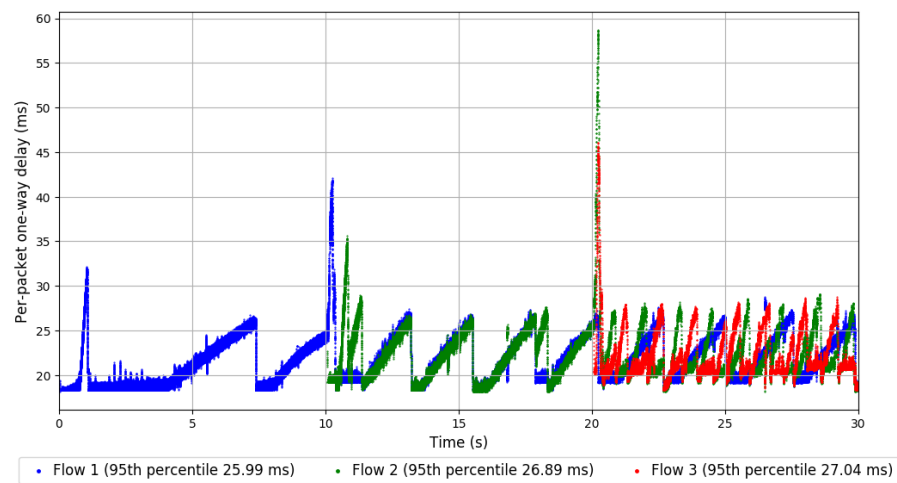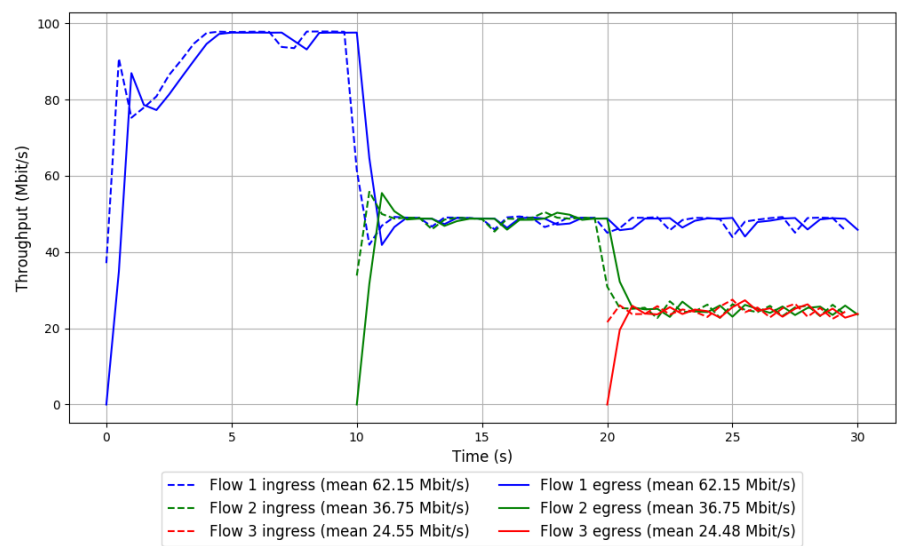
```
Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 12:13:06
End at: 2019-05-30 12:13:36
Local clock offset: 3.095 ms
Remote clock offset: -4.556 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 28.640 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 28.459 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.87 Mbit/s
95th percentile per-packet one-way delay: 28.862 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 24.55 Mbit/s
95th percentile per-packet one-way delay: 29.204 ms
Loss rate: 0.29%
```
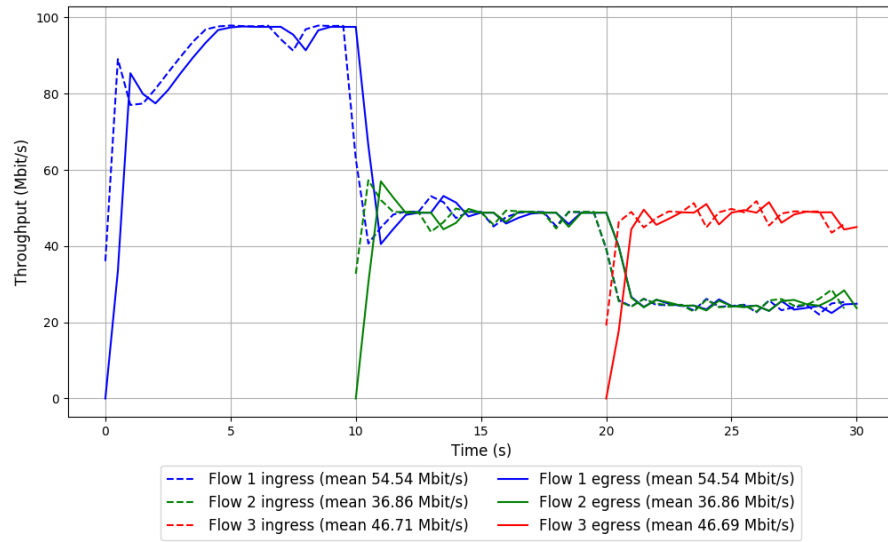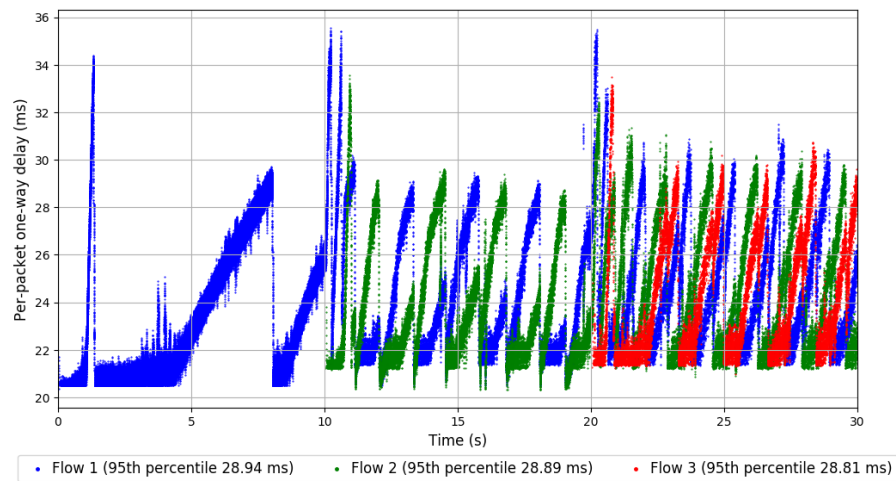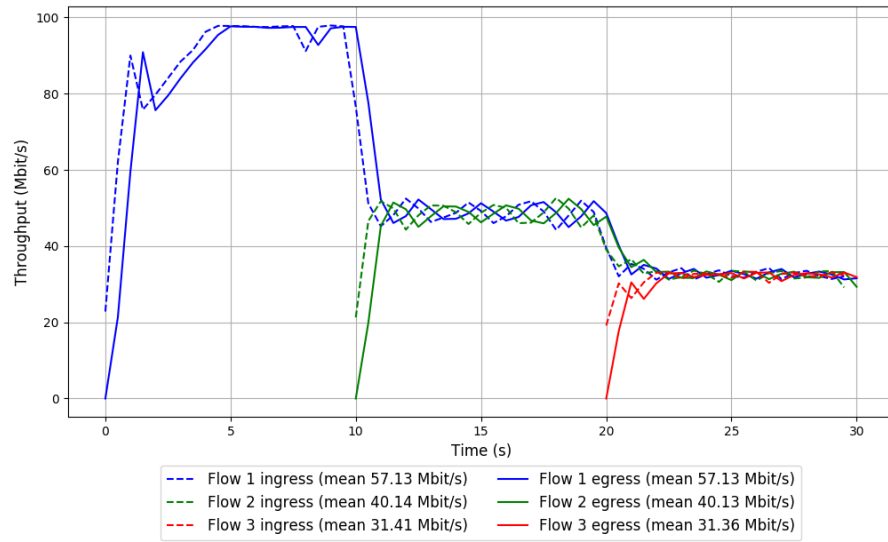
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.33 Mbit/s) --- Flow 1 egress (mean 63.33 Mbit/s)
Flow 2 ingress (mean 36.88 Mbit/s) --- Flow 2 egress (mean 36.87 Mbit/s)
Flow 3 ingress (mean 24.56 Mbit/s) --- Flow 3 egress (mean 24.55 Mbit/s)

Flow 1 (95th percentile 28.46 ms) • Flow 2 (95th percentile 28.86 ms) • Flow 3 (95th percentile 29.20 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 12:40:13
End at: 2019-05-30 12:40:43
Local clock offset: 3.28 ms
Remote clock offset: -4.598 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 28.362 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 54.54 Mbit/s
95th percentile per-packet one-way delay: 28.010 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.86 Mbit/s
95th percentile per-packet one-way delay: 28.929 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 28.389 ms
Loss rate: 0.30%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 54.54 Mbit/s)   Flow 1 egress (mean 54.54 Mbit/s)
Flow 2 ingress (mean 36.86 Mbit/s)   Flow 2 egress (mean 36.86 Mbit/s)
Flow 3 ingress (mean 46.71 Mbit/s)   Flow 3 egress (mean 46.69 Mbit/s)

Flow 1 (95th percentile 28.01 ms)   Flow 2 (95th percentile 28.93 ms)   Flow 3 (95th percentile 28.39 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 13:07:46
End at: 2019-05-30 13:08:16
Local clock offset: 1.645 ms
Remote clock offset: -5.092 ms


# Below is generated by plot.py at 2019-05-30 13:14:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 28.907 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 57.13 Mbit/s
95th percentile per-packet one-way delay: 28.938 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 28.887 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 28.814 ms
Loss rate: 0.40%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 57.13 Mbit/s) --- Flow 1 egress (mean 57.13 Mbit/s)
Flow 2 ingress (mean 40.14 Mbit/s) --- Flow 2 egress (mean 40.13 Mbit/s)
Flow 3 ingress (mean 31.41 Mbit/s) --- Flow 3 egress (mean 31.36 Mbit/s)

Flow 1 (95th percentile 28.94 ms) • Flow 2 (95th percentile 28.89 ms) • Flow 3 (95th percentile 28.81 ms)

```
Run 1: Statistics of FillP

Start at: 2019-05-30 11:11:52
End at: 2019-05-30 11:12:22
Local clock offset: 1.648 ms
Remote clock offset: -0.7 ms


# Below is generated by plot.py at 2019-05-30 13:15:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 79.770 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 54.66 Mbit/s
95th percentile per-packet one-way delay: 60.485 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 49.41 Mbit/s
95th percentile per-packet one-way delay: 85.863 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 24.21 Mbit/s
95th percentile per-packet one-way delay: 90.664 ms
Loss rate: 4.74%
```
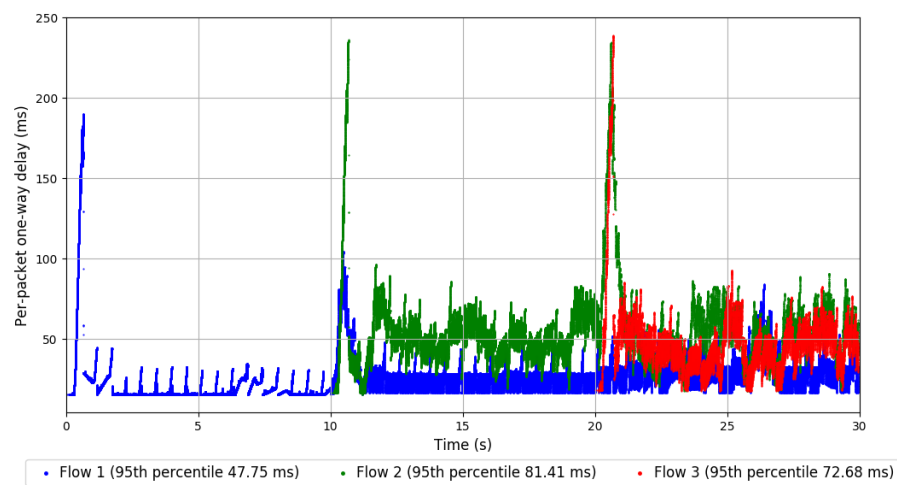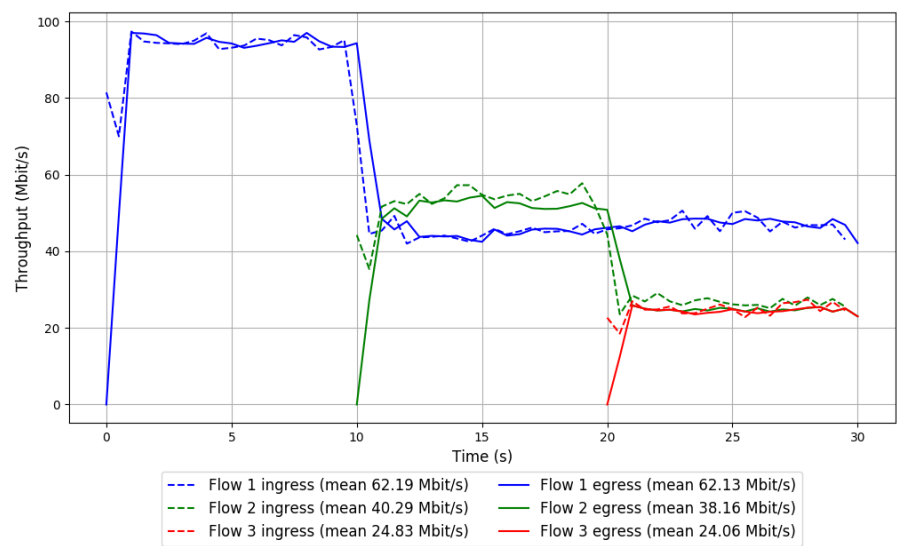
Run 1: Report of FillP — Data Link
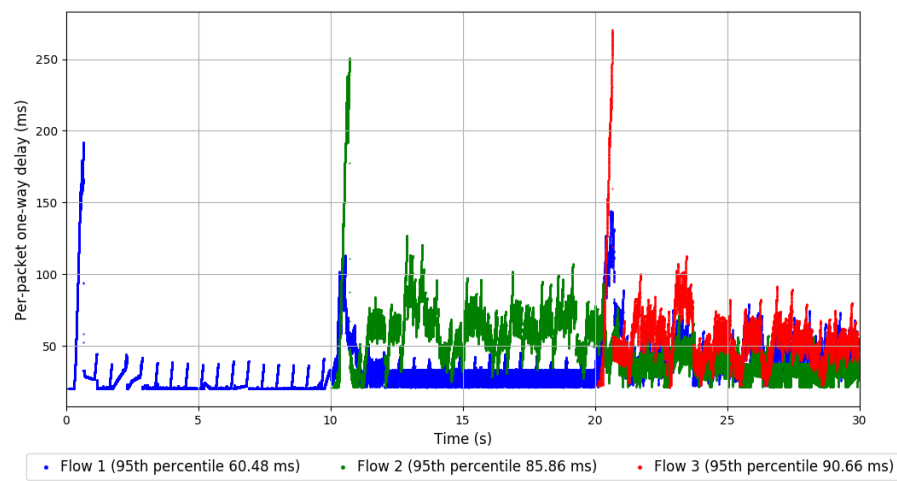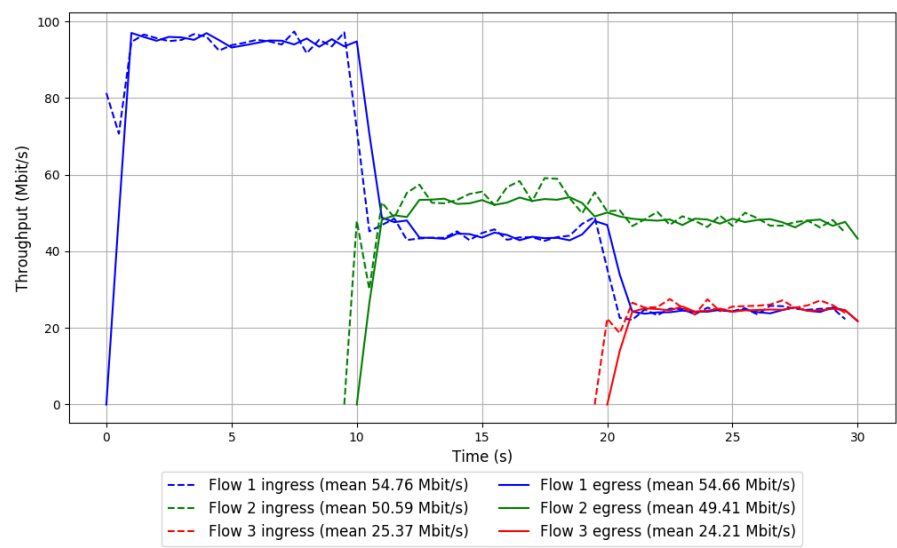
```
Run 2: Statistics of FillP

Start at: 2019-05-30 11:39:27
End at: 2019-05-30 11:39:57
Local clock offset: 2.456 ms
Remote clock offset: -1.365 ms


# Below is generated by plot.py at 2019-05-30 13:15:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.40 Mbit/s
95th percentile per-packet one-way delay: 83.459 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 62.42 Mbit/s
95th percentile per-packet one-way delay: 46.993 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 37.37 Mbit/s
95th percentile per-packet one-way delay: 95.585 ms
Loss rate: 5.47%
-- Flow 3:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 101.520 ms
Loss rate: 6.06%
```

Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 62.46 Mbit/s) Flow 1 egress (mean 62.42 Mbit/s)
Flow 2 ingress (mean 39.49 Mbit/s) Flow 2 egress (mean 37.37 Mbit/s)
Flow 3 ingress (mean 25.87 Mbit/s) Flow 3 egress (mean 24.36 Mbit/s)

Flow 1 (95th percentile 46.99 ms)   Flow 2 (95th percentile 95.58 ms)   Flow 3 (95th percentile 101.52 ms)
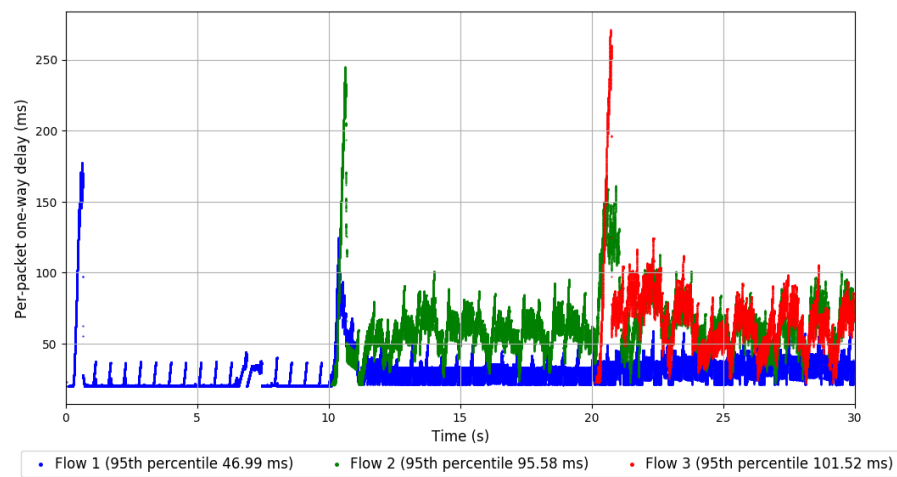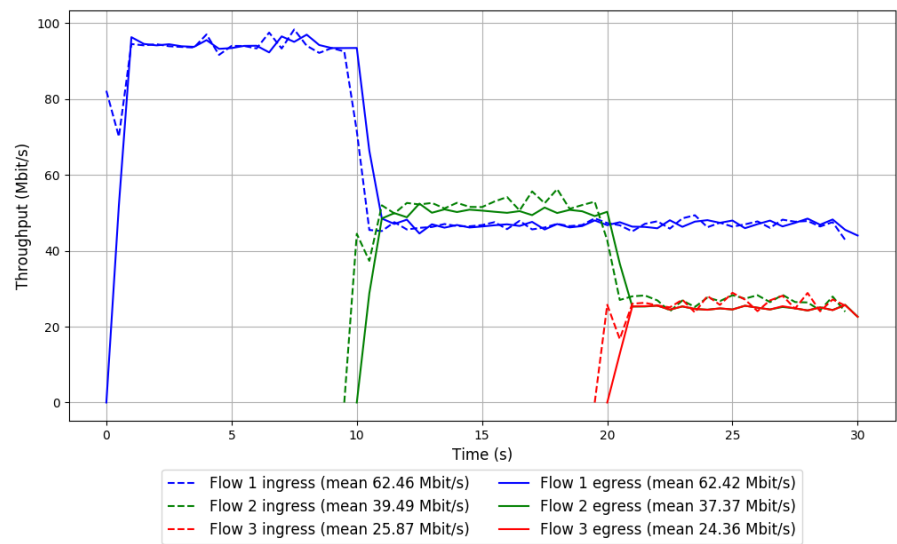
```
Run 3: Statistics of FillP

Start at: 2019-05-30 12:06:45
End at: 2019-05-30 12:07:15
Local clock offset: -1.097 ms
Remote clock offset: -4.575 ms


# Below is generated by plot.py at 2019-05-30 13:15:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 75.057 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 57.70 Mbit/s
95th percentile per-packet one-way delay: 50.581 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 89.417 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 67.140 ms
Loss rate: 2.55%
```

Run 3: Report of FillP — Data Link
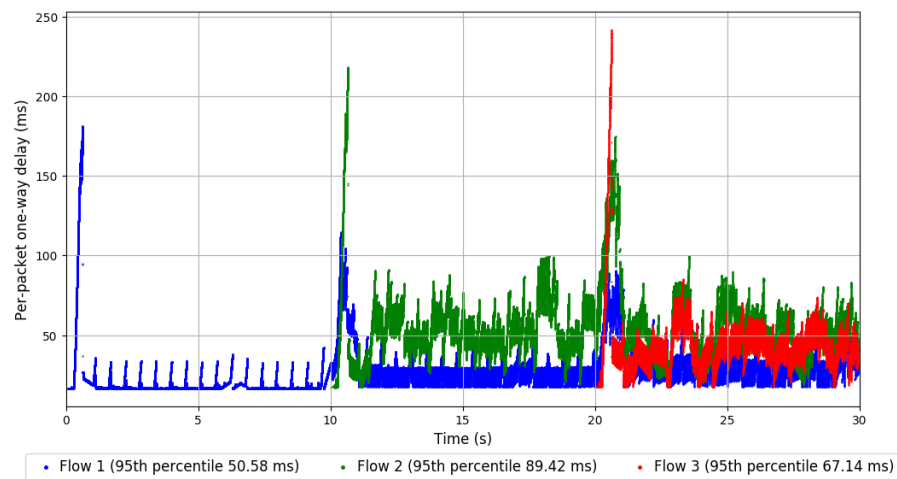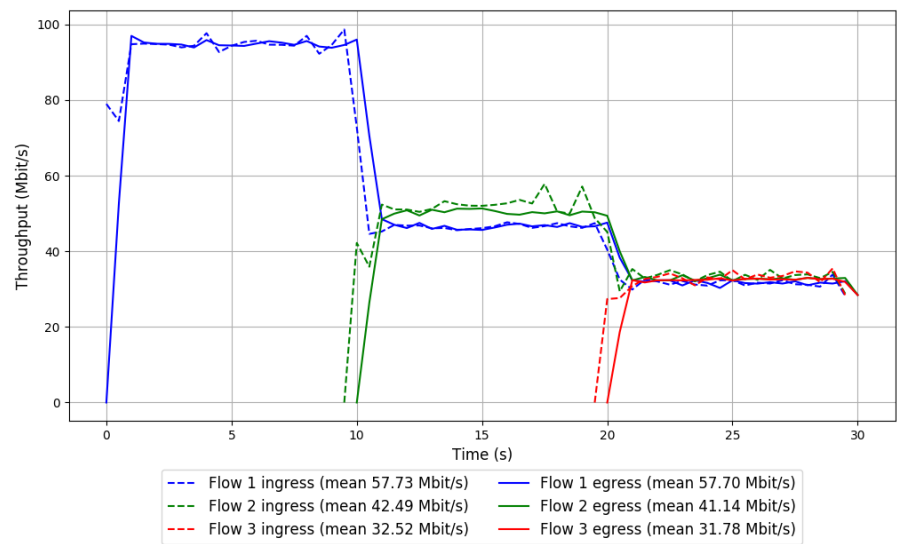
```
Run 4: Statistics of FillP

Start at: 2019-05-30 12:33:29
End at: 2019-05-30 12:33:59
Local clock offset: -0.932 ms
Remote clock offset: -4.252 ms

# Below is generated by plot.py at 2019-05-30 13:15:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 70.518 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 62.13 Mbit/s
95th percentile per-packet one-way delay: 47.748 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 38.16 Mbit/s
95th percentile per-packet one-way delay: 81.411 ms
Loss rate: 5.41%
-- Flow 3:
Average throughput: 24.06 Mbit/s
95th percentile per-packet one-way delay: 72.679 ms
Loss rate: 3.32%
```

Run 4: Report of FillP — Data Link

- - - Flow 1 ingress (mean 62.19 Mbit/s)   —— Flow 1 egress (mean 62.13 Mbit/s)
- - - Flow 2 ingress (mean 40.29 Mbit/s)   —— Flow 2 egress (mean 38.16 Mbit/s)
- - - Flow 3 ingress (mean 24.83 Mbit/s)   —— Flow 3 egress (mean 24.06 Mbit/s)

- Flow 1 (95th percentile 47.75 ms)   • Flow 2 (95th percentile 81.41 ms)   • Flow 3 (95th percentile 72.68 ms)

```
Run 5: Statistics of FillP

Start at: 2019-05-30 13:01:09
End at: 2019-05-30 13:01:39
Local clock offset: -2.92 ms
Remote clock offset: -5.353 ms


# Below is generated by plot.py at 2019-05-30 13:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 66.994 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 57.42 Mbit/s
95th percentile per-packet one-way delay: 51.560 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 41.34 Mbit/s
95th percentile per-packet one-way delay: 78.133 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 64.429 ms
Loss rate: 2.53%
```
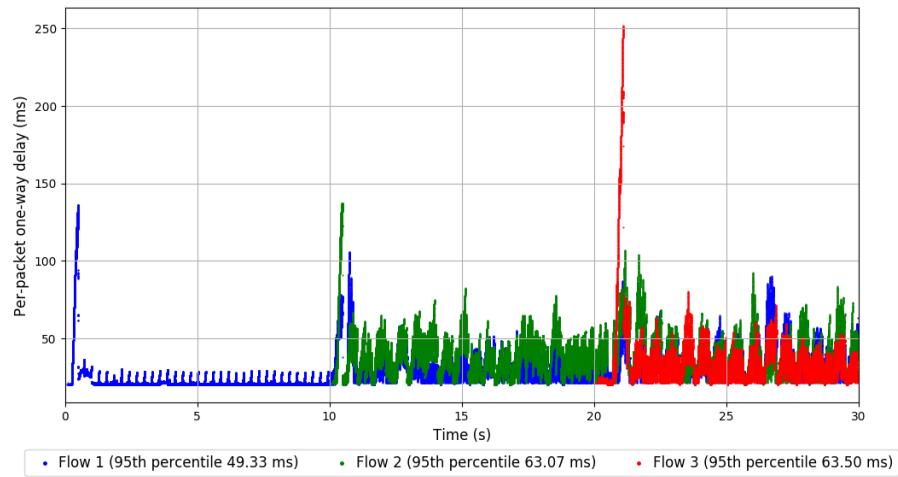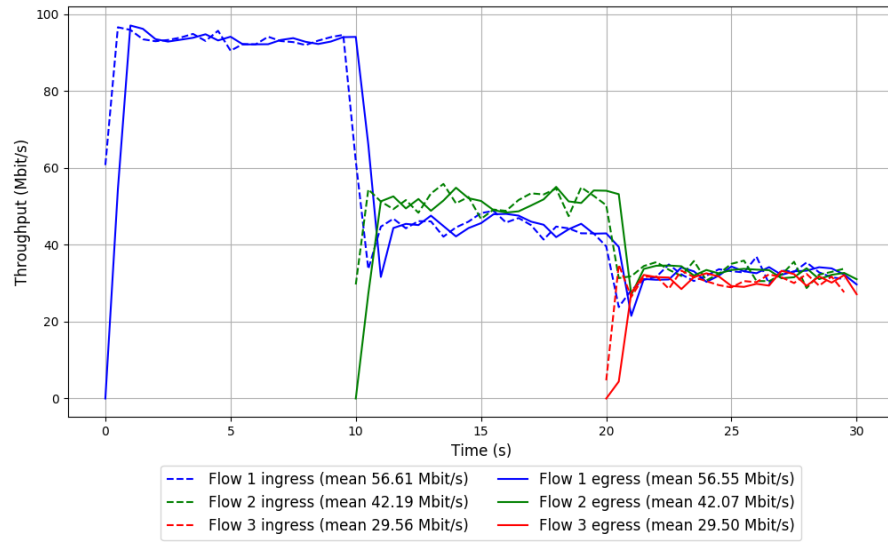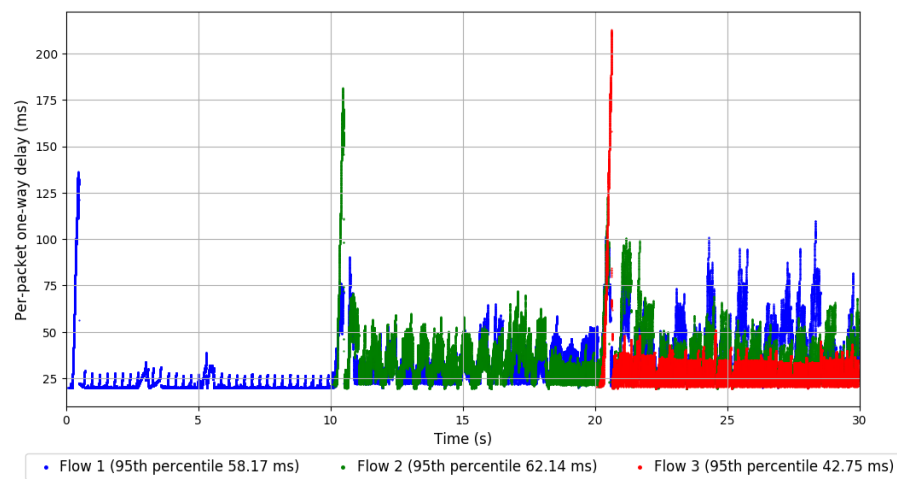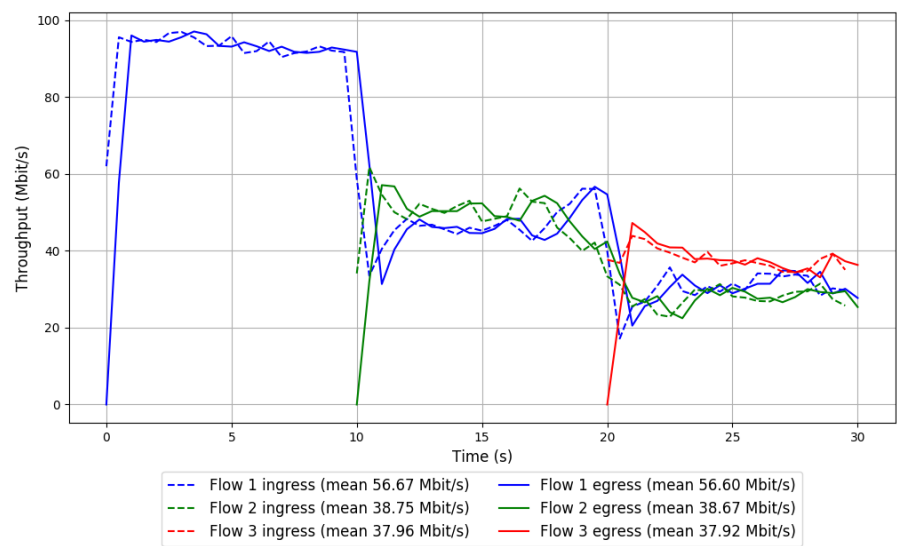
Run 5: Report of FillP — Data Link
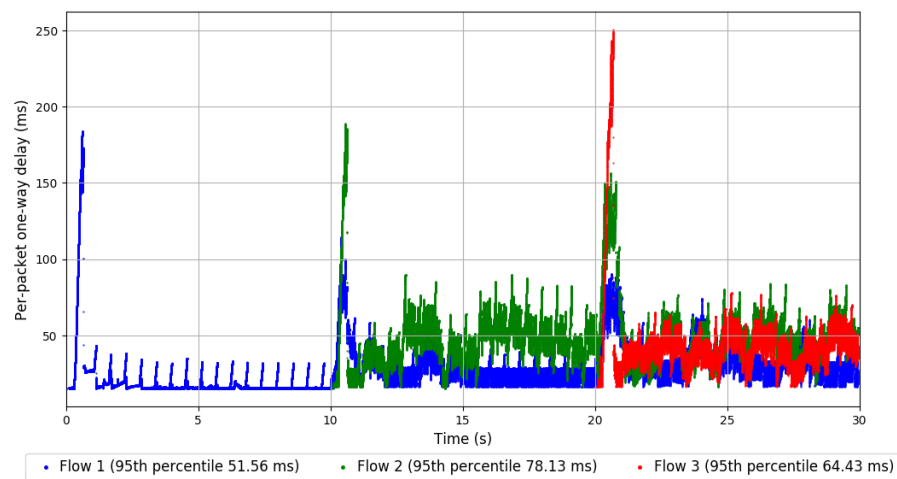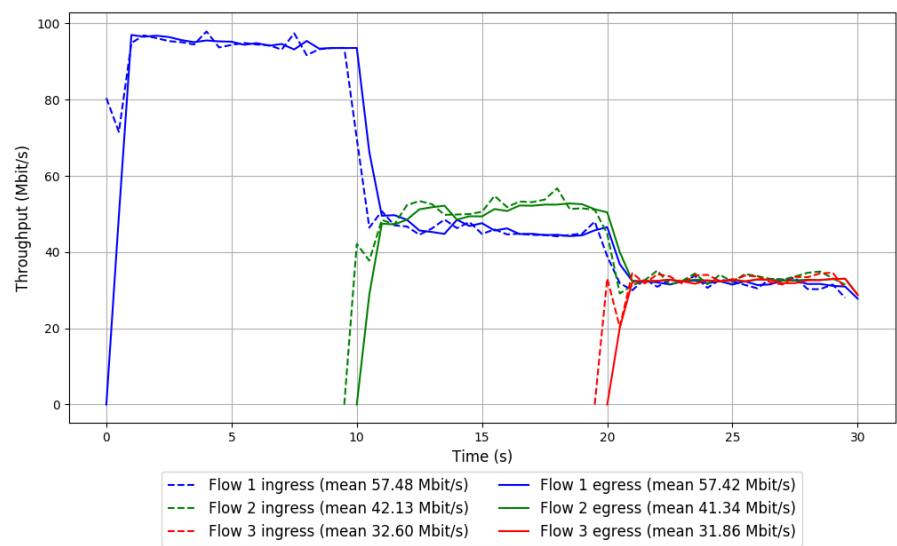
```
Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 10:55:14
End at: 2019-05-30 10:55:44
Local clock offset: 3.196 ms
Remote clock offset: 0.396 ms


# Below is generated by plot.py at 2019-05-30 13:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 57.822 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 56.55 Mbit/s
95th percentile per-packet one-way delay: 49.332 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 63.071 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 29.50 Mbit/s
95th percentile per-packet one-way delay: 63.503 ms
Loss rate: 0.43%
```

Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 56.61 Mbit/s)   Flow 1 egress (mean 56.55 Mbit/s)
Flow 2 ingress (mean 42.19 Mbit/s)   Flow 2 egress (mean 42.07 Mbit/s)
Flow 3 ingress (mean 29.56 Mbit/s)   Flow 3 egress (mean 29.50 Mbit/s)

Flow 1 (95th percentile 49.33 ms)   Flow 2 (95th percentile 63.07 ms)   Flow 3 (95th percentile 63.50 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-05-30 11:22:32
End at: 2019-05-30 11:23:02
Local clock offset: 1.695 ms
Remote clock offset: -0.247 ms


# Below is generated by plot.py at 2019-05-30 13:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 59.018 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 56.60 Mbit/s
95th percentile per-packet one-way delay: 58.166 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 38.67 Mbit/s
95th percentile per-packet one-way delay: 62.139 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 37.92 Mbit/s
95th percentile per-packet one-way delay: 42.749 ms
Loss rate: 0.34%
```
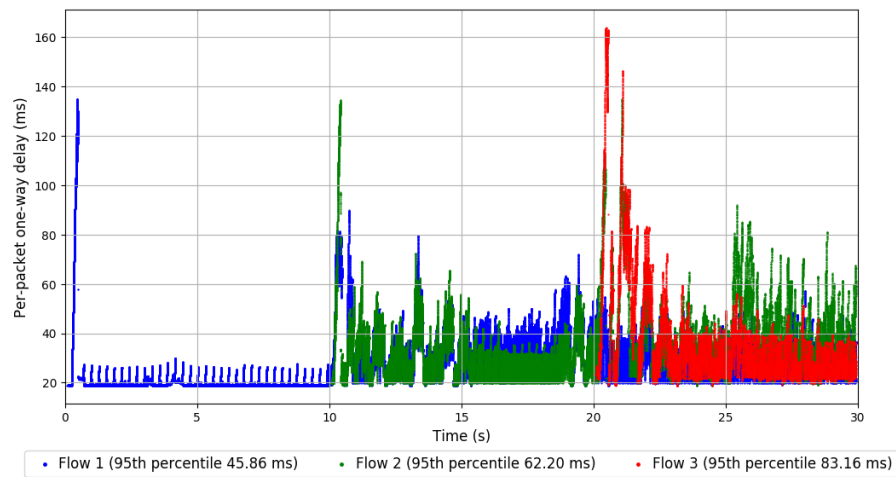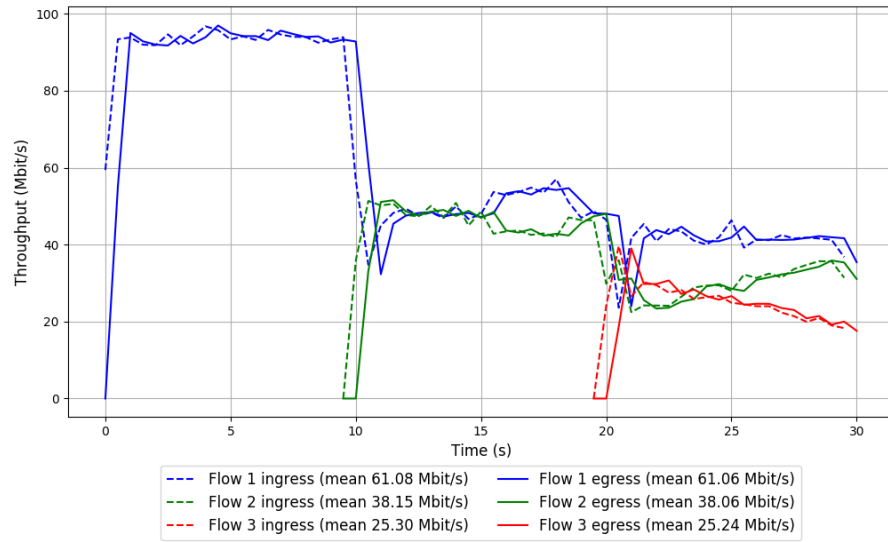
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 56.67 Mbit/s) --- Flow 1 egress (mean 56.60 Mbit/s)
Flow 2 ingress (mean 38.75 Mbit/s) --- Flow 2 egress (mean 38.67 Mbit/s)
Flow 3 ingress (mean 37.96 Mbit/s) --- Flow 3 egress (mean 37.92 Mbit/s)

Flow 1 (95th percentile 58.17 ms)   Flow 2 (95th percentile 62.14 ms)   Flow 3 (95th percentile 42.75 ms)
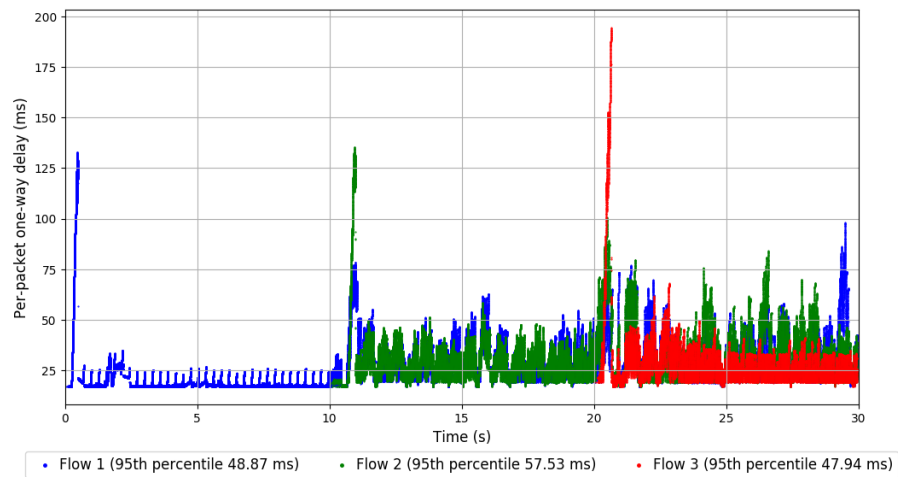
48

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 11:49:43
End at: 2019-05-30 11:50:13
Local clock offset: -2.027 ms
Remote clock offset: -3.54 ms


# Below is generated by plot.py at 2019-05-30 13:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.85 Mbit/s
95th percentile per-packet one-way delay: 50.671 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 58.01 Mbit/s
95th percentile per-packet one-way delay: 45.793 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 54.832 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 59.495 ms
Loss rate: 0.45%
```

# Run 3: Report of FillP-Sheep — Data Link
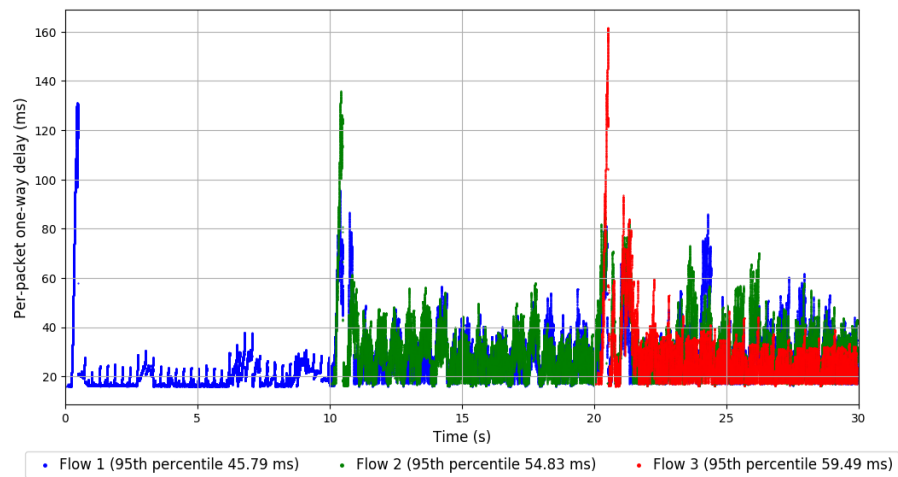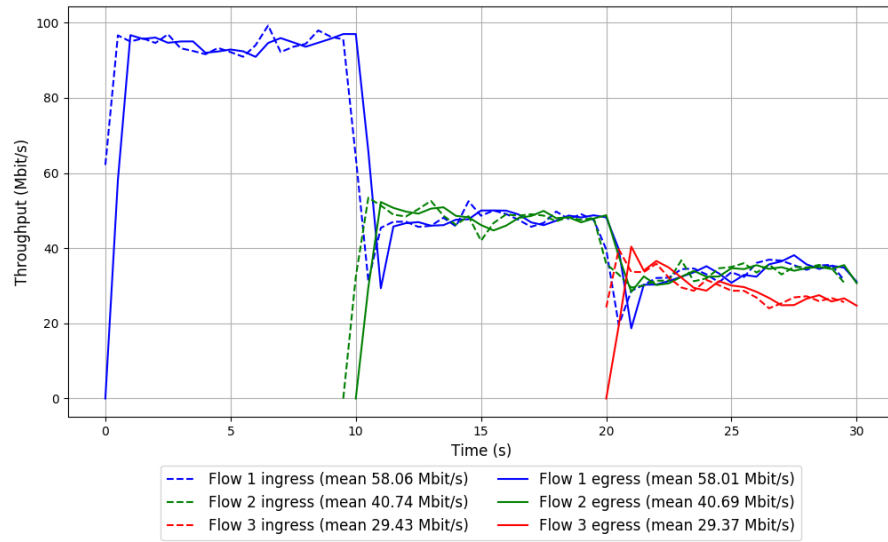
```
Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 12:16:49
End at: 2019-05-30 12:17:19
Local clock offset: 2.127 ms
Remote clock offset: -4.146 ms


# Below is generated by plot.py at 2019-05-30 13:16:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.82 Mbit/s
95th percentile per-packet one-way delay: 55.432 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 61.06 Mbit/s
95th percentile per-packet one-way delay: 45.864 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 38.06 Mbit/s
95th percentile per-packet one-way delay: 62.204 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 25.24 Mbit/s
95th percentile per-packet one-way delay: 83.157 ms
Loss rate: 0.47%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 61.08 Mbit/s)   Flow 1 egress (mean 61.06 Mbit/s)
Flow 2 ingress (mean 38.15 Mbit/s)   Flow 2 egress (mean 38.06 Mbit/s)
Flow 3 ingress (mean 25.30 Mbit/s)   Flow 3 egress (mean 25.24 Mbit/s)

Flow 1 (95th percentile 45.86 ms)   Flow 2 (95th percentile 62.20 ms)   Flow 3 (95th percentile 83.16 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 12:44:09
End at: 2019-05-30 12:44:39
Local clock offset: -1.33 ms
Remote clock offset: -6.195 ms


# Below is generated by plot.py at 2019-05-30 13:16:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.17 Mbit/s
95th percentile per-packet one-way delay: 51.698 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 58.34 Mbit/s
95th percentile per-packet one-way delay: 48.871 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 39.93 Mbit/s
95th percentile per-packet one-way delay: 57.529 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 27.83 Mbit/s
95th percentile per-packet one-way delay: 47.944 ms
Loss rate: 0.46%
```

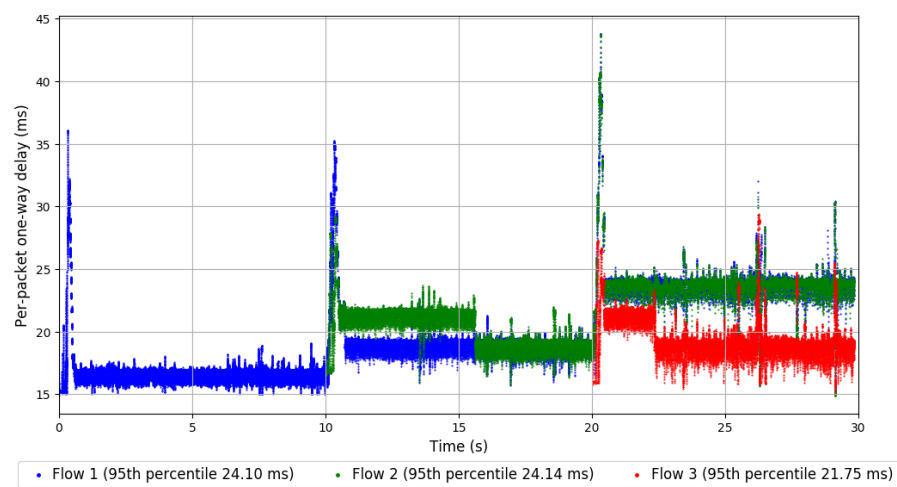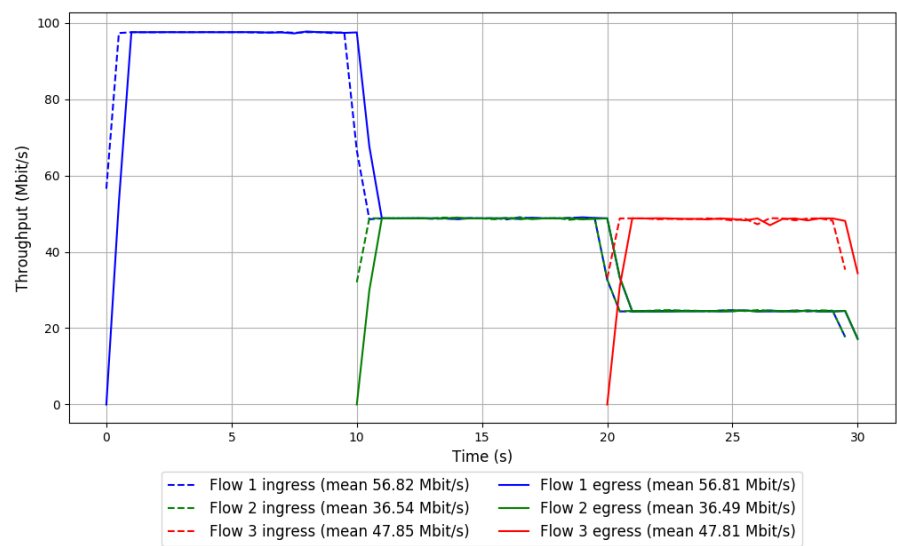# Run 5: Report of FillP-Sheep — Data Link
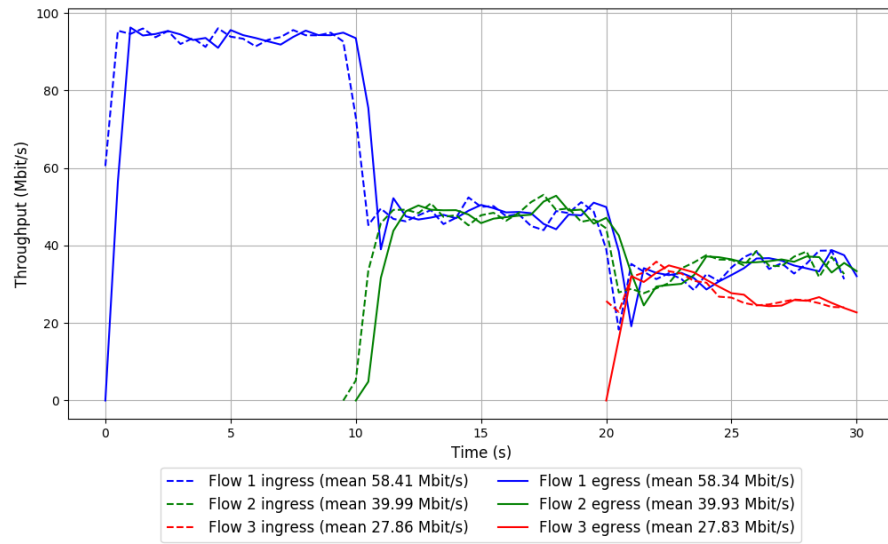
```
Run 1: Statistics of Indigo

Start at: 2019-05-30 11:10:32
End at: 2019-05-30 11:11:02
Local clock offset: 2.94 ms
Remote clock offset: -0.889 ms


# Below is generated by plot.py at 2019-05-30 13:16:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.67 Mbit/s
95th percentile per-packet one-way delay: 29.605 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.33 Mbit/s
95th percentile per-packet one-way delay: 28.710 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.36 Mbit/s
95th percentile per-packet one-way delay: 29.646 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 29.848 ms
Loss rate: 0.30%
```

Run 1: Report of Indigo — Data Link
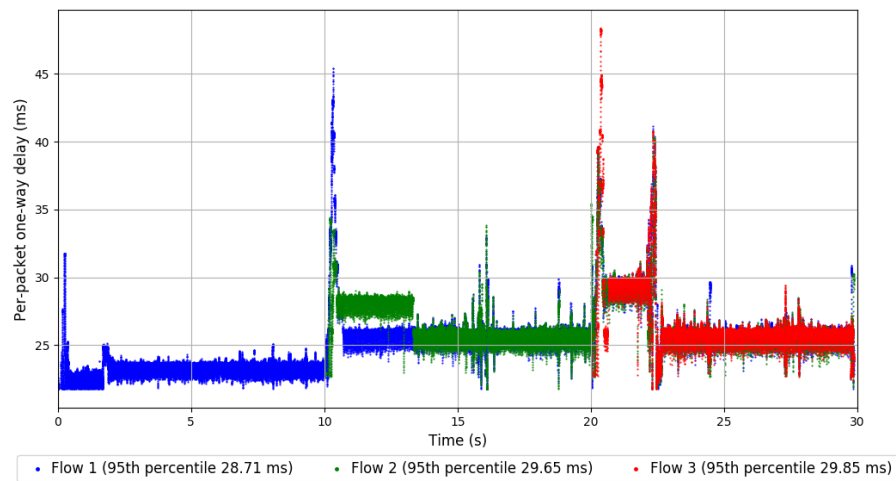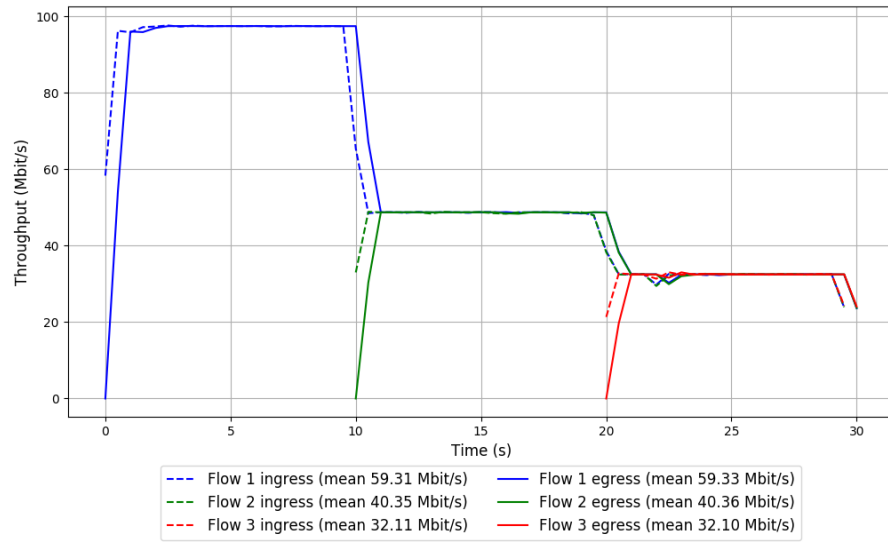
```
Run 2: Statistics of Indigo

Start at: 2019-05-30 11:38:08
End at: 2019-05-30 11:38:38
Local clock offset: -2.758 ms
Remote clock offset: -0.983 ms


# Below is generated by plot.py at 2019-05-30 13:16:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 24.086 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 24.098 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 24.138 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 47.81 Mbit/s
95th percentile per-packet one-way delay: 21.746 ms
Loss rate: 0.34%
```
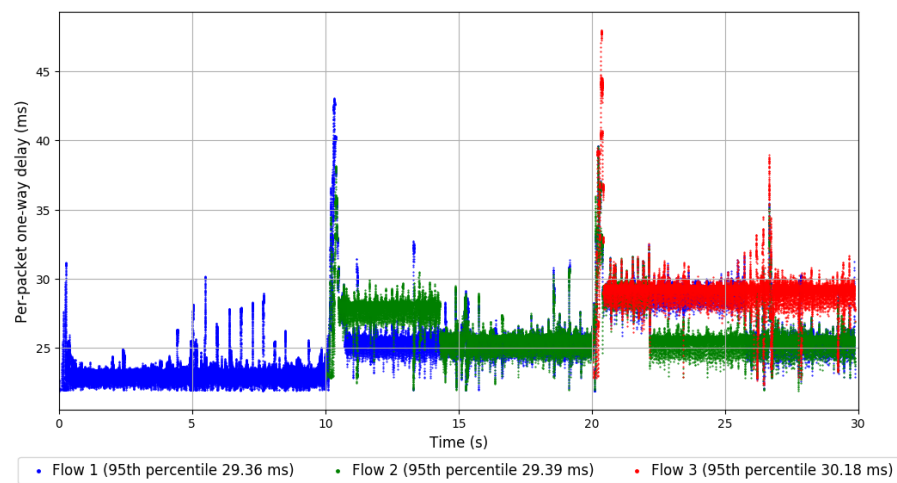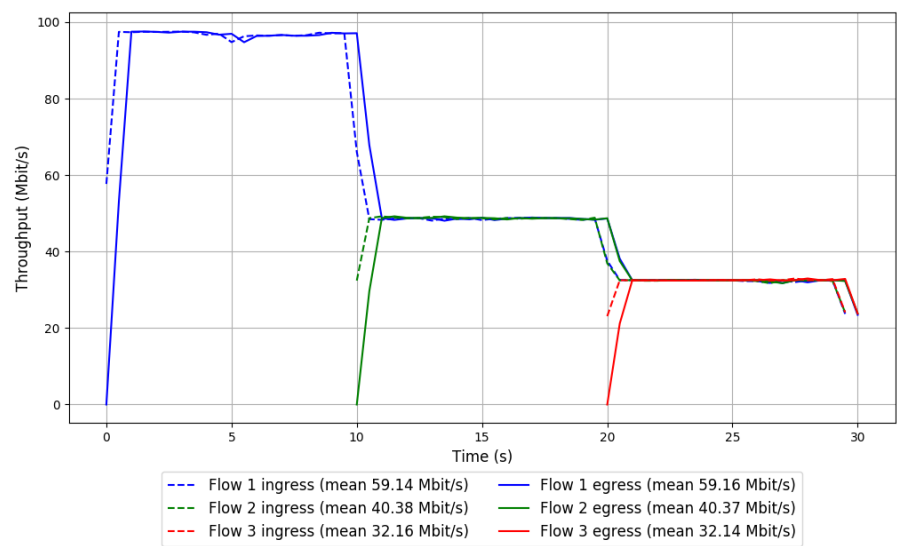
Run 2: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 56.82 Mbit/s)   —— Flow 1 egress (mean 56.81 Mbit/s)
- - - - Flow 2 ingress (mean 36.54 Mbit/s)   —— Flow 2 egress (mean 36.49 Mbit/s)
- - - - Flow 3 ingress (mean 47.85 Mbit/s)   —— Flow 3 egress (mean 47.81 Mbit/s)

• Flow 1 (95th percentile 24.10 ms)   • Flow 2 (95th percentile 24.14 ms)   • Flow 3 (95th percentile 21.75 ms)
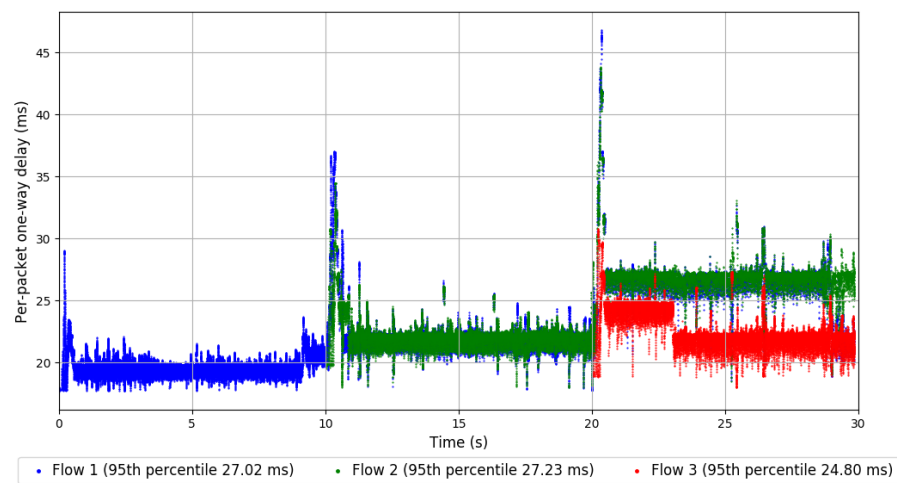
```
Run 3: Statistics of Indigo

Start at: 2019-05-30 12:05:25
End at: 2019-05-30 12:05:55
Local clock offset: 2.69 ms
Remote clock offset: -2.793 ms


# Below is generated by plot.py at 2019-05-30 13:17:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 27.782 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 56.89 Mbit/s
95th percentile per-packet one-way delay: 27.841 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 27.777 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 47.89 Mbit/s
95th percentile per-packet one-way delay: 25.323 ms
Loss rate: 0.29%
```
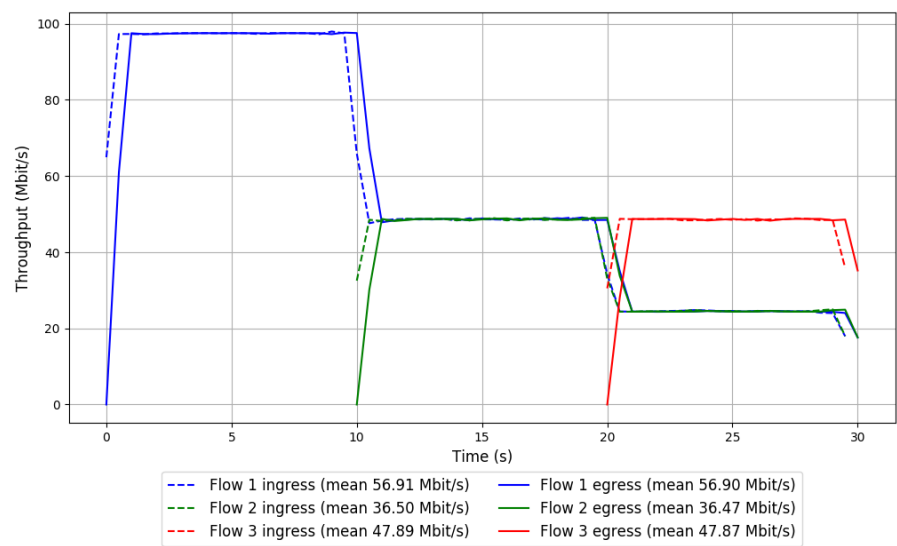
Run 3: Report of Indigo — Data Link
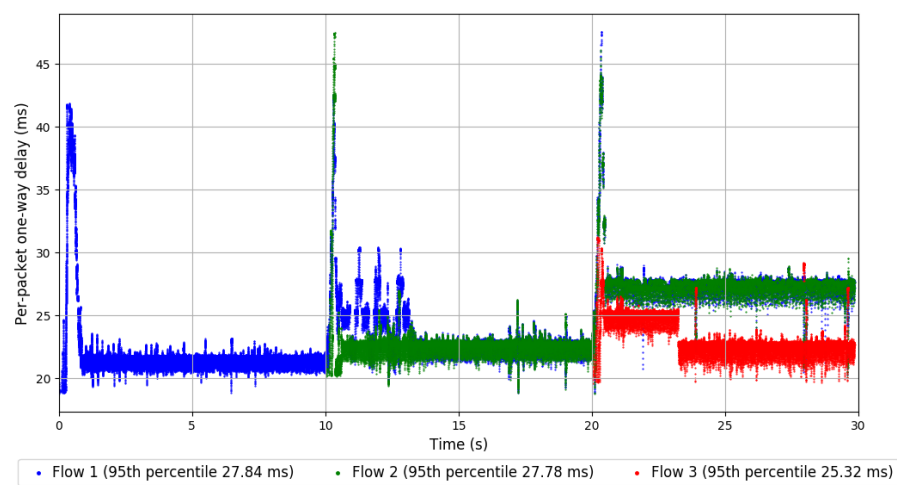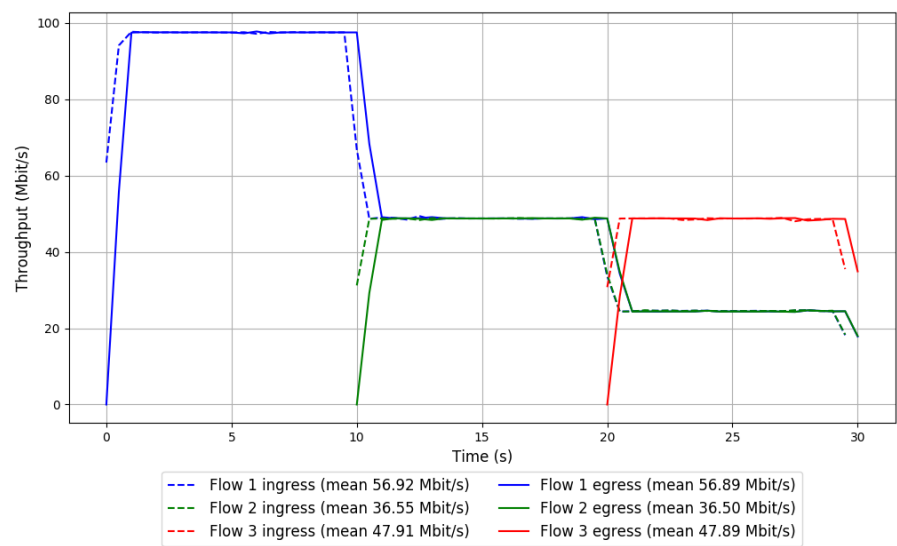
```
Run 4: Statistics of Indigo

Start at: 2019-05-30 12:32:03
End at: 2019-05-30 12:32:33
Local clock offset: 0.934 ms
Remote clock offset: -8.928 ms


# Below is generated by plot.py at 2019-05-30 13:17:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.55 Mbit/s
95th percentile per-packet one-way delay: 29.471 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 59.16 Mbit/s
95th percentile per-packet one-way delay: 29.363 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 29.390 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 30.176 ms
Loss rate: 0.34%
```

Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 59.14 Mbit/s) — Flow 1 egress (mean 59.16 Mbit/s)
Flow 2 ingress (mean 40.38 Mbit/s) — Flow 2 egress (mean 40.37 Mbit/s)
Flow 3 ingress (mean 32.16 Mbit/s) — Flow 3 egress (mean 32.14 Mbit/s)

Flow 1 (95th percentile 29.36 ms)   Flow 2 (95th percentile 29.39 ms)   Flow 3 (95th percentile 30.18 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-05-30 12:59:44
End at: 2019-05-30 13:00:14
Local clock offset: -2.33 ms
Remote clock offset: -7.621 ms


# Below is generated by plot.py at 2019-05-30 13:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.86 Mbit/s
95th percentile per-packet one-way delay: 27.106 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 56.90 Mbit/s
95th percentile per-packet one-way delay: 27.018 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 27.230 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 47.87 Mbit/s
95th percentile per-packet one-way delay: 24.803 ms
Loss rate: 0.30%
```

Run 5: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 56.91 Mbit/s) —— Flow 1 egress (mean 56.90 Mbit/s)
- - - Flow 2 ingress (mean 36.50 Mbit/s) —— Flow 2 egress (mean 36.47 Mbit/s)
- - - Flow 3 ingress (mean 47.89 Mbit/s) —— Flow 3 egress (mean 47.87 Mbit/s)

· Flow 1 (95th percentile 27.02 ms)   · Flow 2 (95th percentile 27.23 ms)   · Flow 3 (95th percentile 24.80 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 11:02:49
End at: 2019-05-30 11:03:19
Local clock offset: 2.812 ms
Remote clock offset: 0.72 ms


# Below is generated by plot.py at 2019-05-30 13:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.13 Mbit/s
95th percentile per-packet one-way delay: 26.469 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 51.15 Mbit/s
95th percentile per-packet one-way delay: 24.356 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 38.89 Mbit/s
95th percentile per-packet one-way delay: 27.600 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 21.50 Mbit/s
95th percentile per-packet one-way delay: 27.067 ms
Loss rate: 0.33%
```

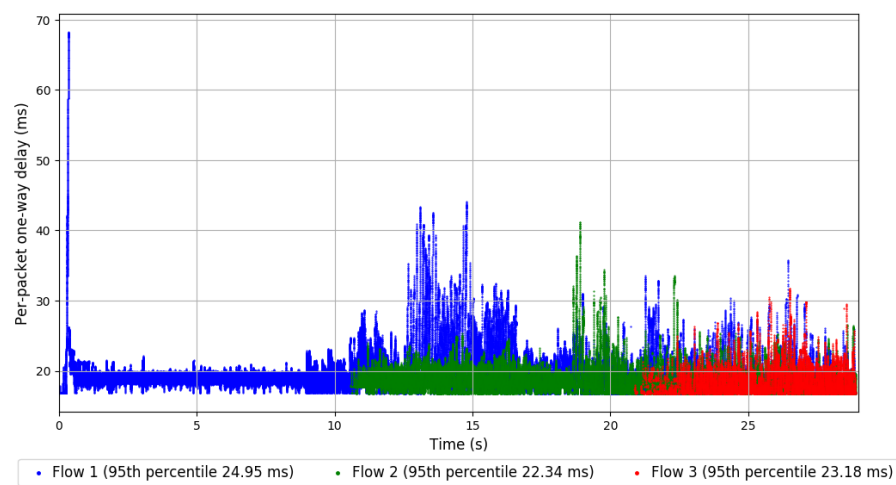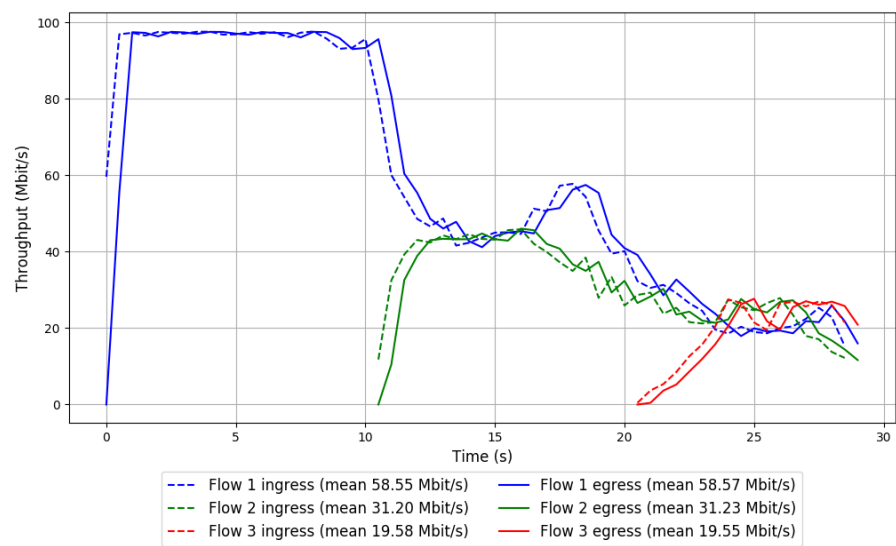Run 1: Report of Indigo-MusesC3 — Data Link

66
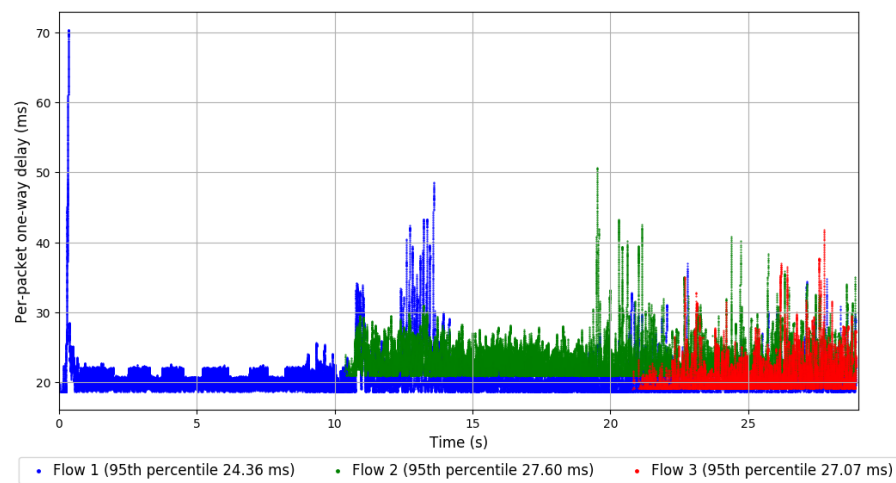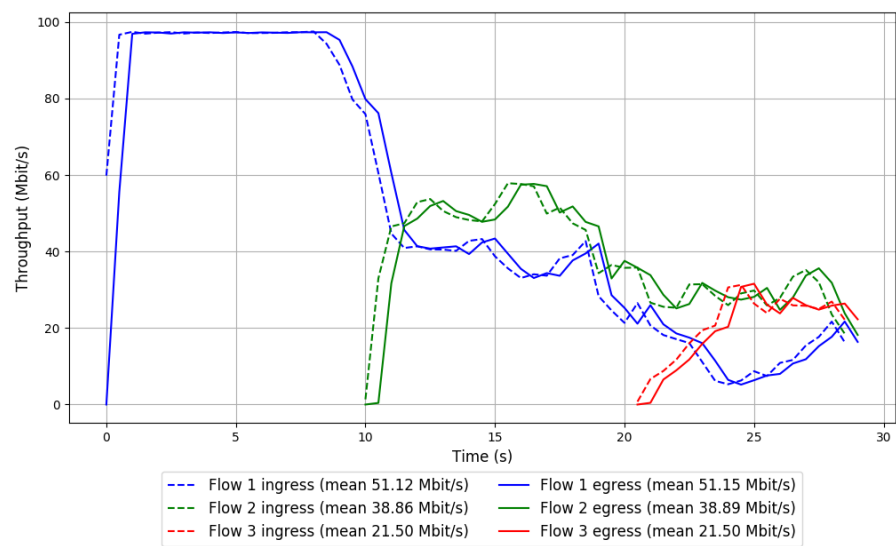
```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 11:30:07
End at: 2019-05-30 11:30:37
Local clock offset: 1.565 ms
Remote clock offset: -1.805 ms


# Below is generated by plot.py at 2019-05-30 13:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 27.758 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 56.11 Mbit/s
95th percentile per-packet one-way delay: 27.808 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 34.65 Mbit/s
95th percentile per-packet one-way delay: 27.797 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 27.288 ms
Loss rate: 0.57%
```

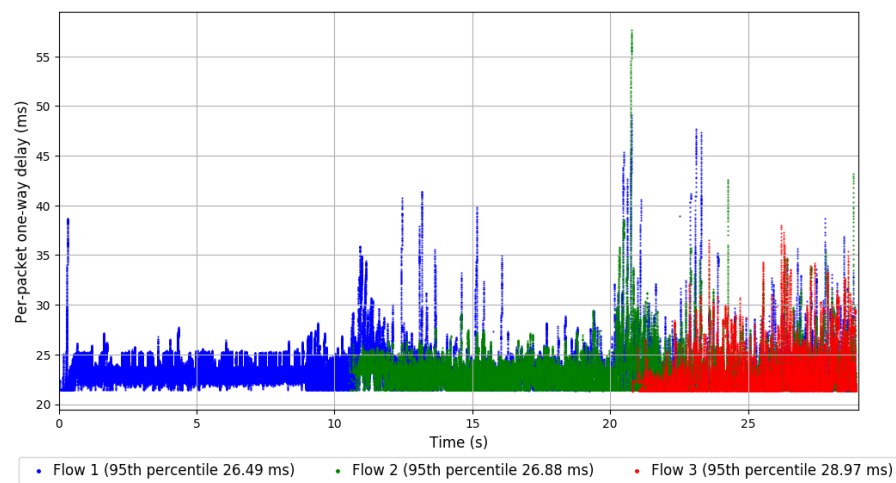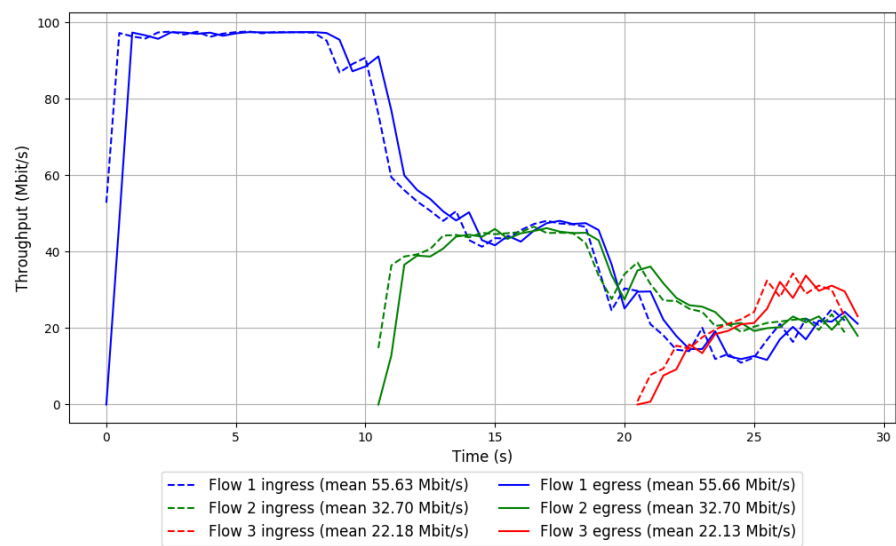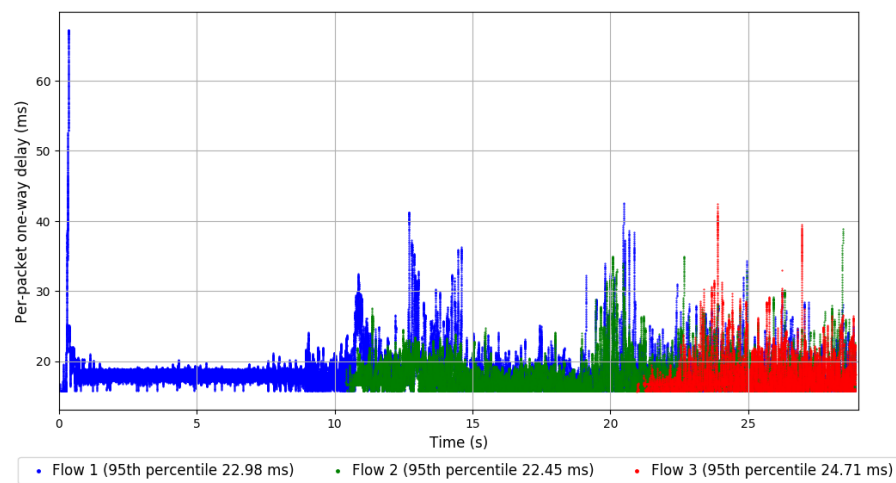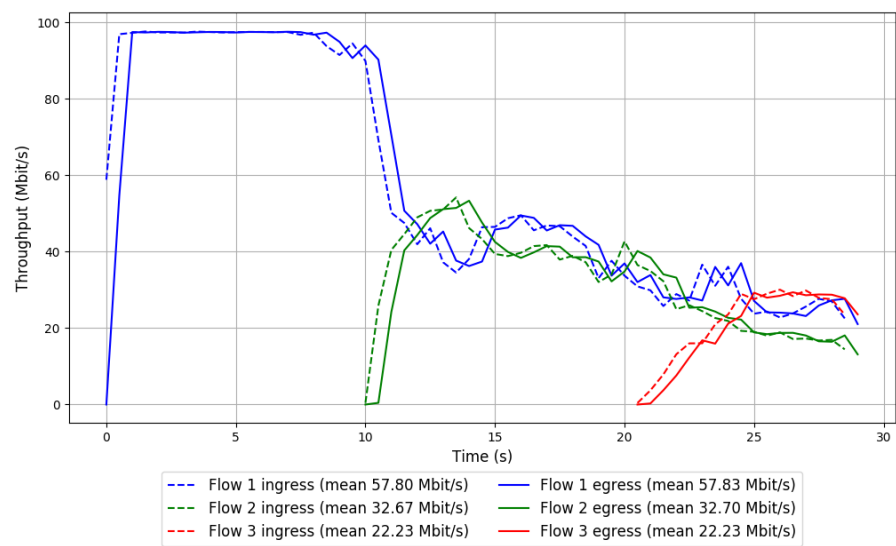Run 2: Report of Indigo-MusesC3 — Data Link
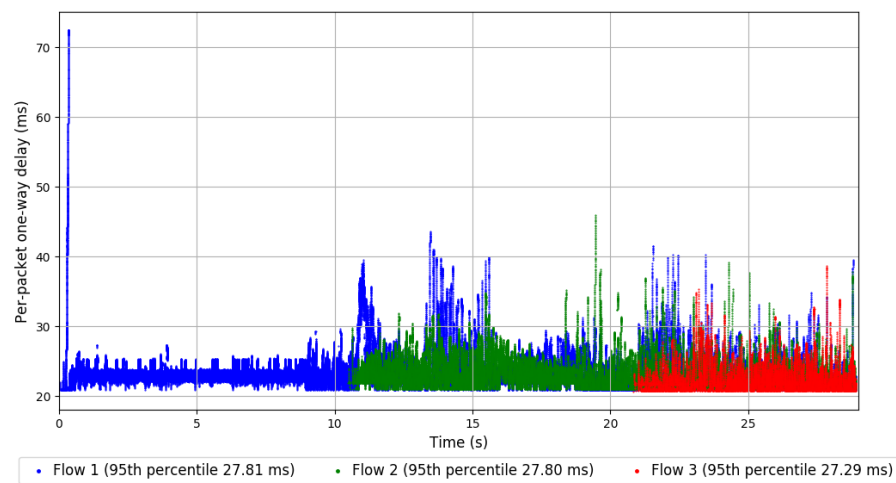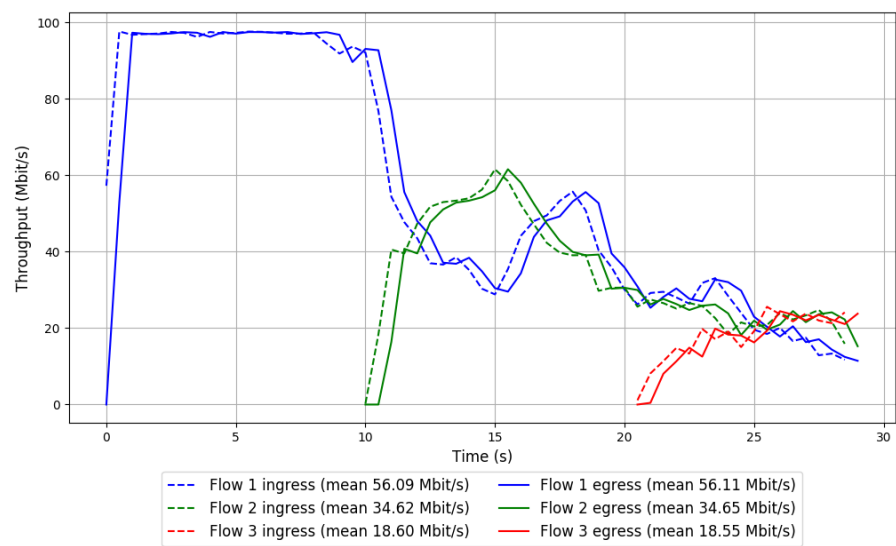
```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 11:57:47
End at: 2019-05-30 11:58:17
Local clock offset: -0.64 ms
Remote clock offset: -3.498 ms


# Below is generated by plot.py at 2019-05-30 13:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.81 Mbit/s
95th percentile per-packet one-way delay: 24.229 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 58.57 Mbit/s
95th percentile per-packet one-way delay: 24.955 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 31.23 Mbit/s
95th percentile per-packet one-way delay: 22.339 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 19.55 Mbit/s
95th percentile per-packet one-way delay: 23.178 ms
Loss rate: 0.49%
```

Run 3: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 58.55 Mbit/s) — Flow 1 egress (mean 58.57 Mbit/s)
- - - - Flow 2 ingress (mean 31.20 Mbit/s) — Flow 2 egress (mean 31.23 Mbit/s)
- - - - Flow 3 ingress (mean 19.58 Mbit/s) — Flow 3 egress (mean 19.55 Mbit/s)

- Flow 1 (95th percentile 24.95 ms)   • Flow 2 (95th percentile 22.34 ms)   • Flow 3 (95th percentile 23.18 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 12:24:20
End at: 2019-05-30 12:24:50
Local clock offset: 3.673 ms
Remote clock offset: -5.132 ms


# Below is generated by plot.py at 2019-05-30 13:17:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.67 Mbit/s
95th percentile per-packet one-way delay: 26.889 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 26.491 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 26.881 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 28.969 ms
Loss rate: 0.47%
```
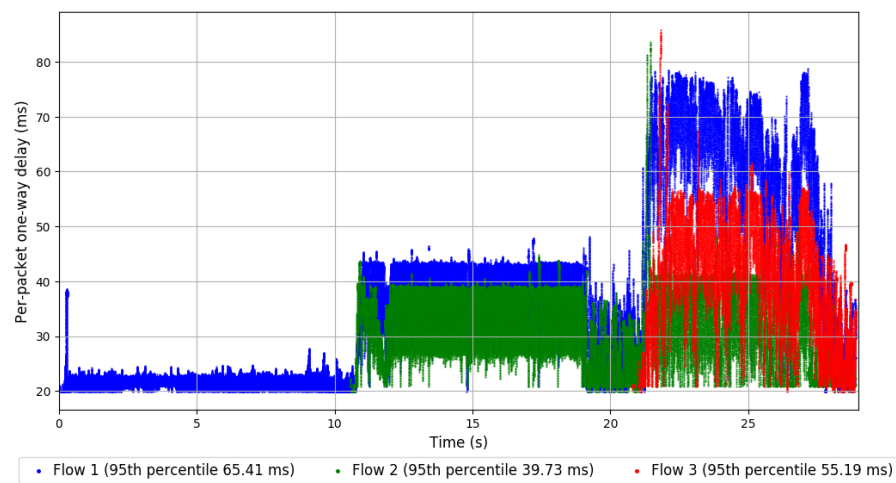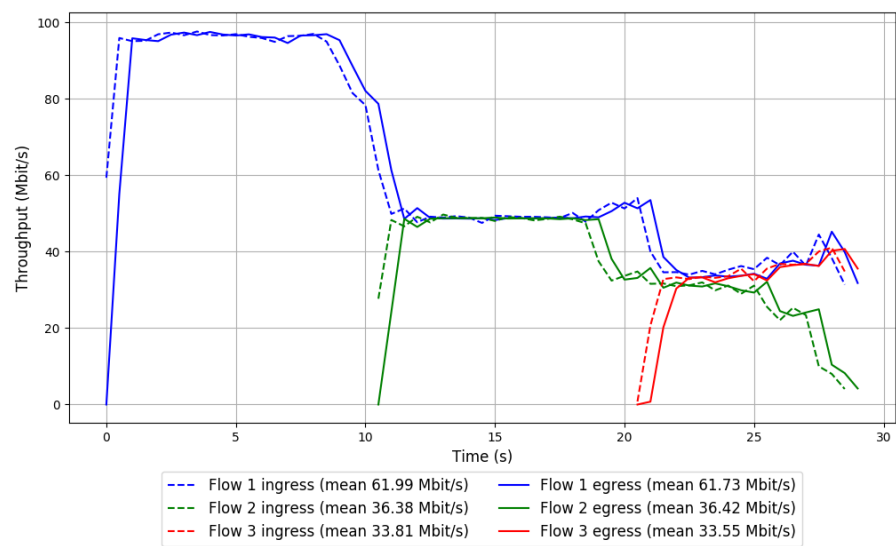
Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 55.63 Mbit/s) --- Flow 1 egress (mean 55.66 Mbit/s)
Flow 2 ingress (mean 32.70 Mbit/s) --- Flow 2 egress (mean 32.70 Mbit/s)
Flow 3 ingress (mean 22.18 Mbit/s) --- Flow 3 egress (mean 22.13 Mbit/s)

Flow 1 (95th percentile 26.49 ms)   Flow 2 (95th percentile 26.88 ms)   Flow 3 (95th percentile 28.97 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 12:51:52
End at: 2019-05-30 12:52:22
Local clock offset: -3.478 ms
Remote clock offset: -6.828 ms


# Below is generated by plot.py at 2019-05-30 13:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.88 Mbit/s
95th percentile per-packet one-way delay: 22.951 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 57.83 Mbit/s
95th percentile per-packet one-way delay: 22.975 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 22.451 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 22.23 Mbit/s
95th percentile per-packet one-way delay: 24.714 ms
Loss rate: 0.25%
```

Run 5: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 57.80 Mbit/s)   —— Flow 1 egress (mean 57.83 Mbit/s)
- - - - Flow 2 ingress (mean 32.67 Mbit/s)   —— Flow 2 egress (mean 32.70 Mbit/s)
- - - - Flow 3 ingress (mean 22.23 Mbit/s)   —— Flow 3 egress (mean 22.23 Mbit/s)

- Flow 1 (95th percentile 22.98 ms)   • Flow 2 (95th percentile 22.45 ms)   • Flow 3 (95th percentile 24.71 ms)
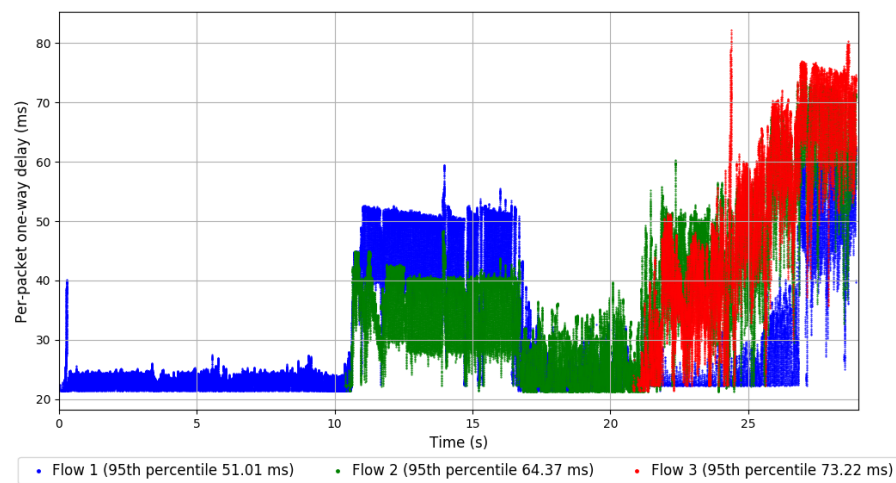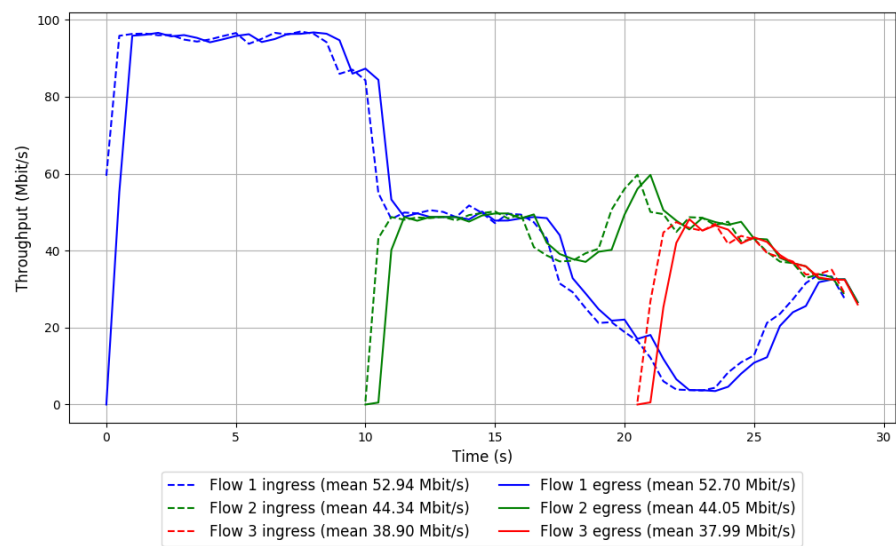
```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 10:53:53
End at: 2019-05-30 10:54:23
Local clock offset: 3.194 ms
Remote clock offset: 1.005 ms


# Below is generated by plot.py at 2019-05-30 13:17:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 60.611 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 65.405 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 39.733 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.55 Mbit/s
95th percentile per-packet one-way delay: 55.194 ms
Loss rate: 0.93%
```

Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 61.99 Mbit/s) --- Flow 1 egress (mean 61.73 Mbit/s)
Flow 2 ingress (mean 36.38 Mbit/s) --- Flow 2 egress (mean 36.42 Mbit/s)
Flow 3 ingress (mean 33.81 Mbit/s) --- Flow 3 egress (mean 33.55 Mbit/s)

Flow 1 (95th percentile 65.41 ms) Flow 2 (95th percentile 39.73 ms) Flow 3 (95th percentile 55.19 ms)
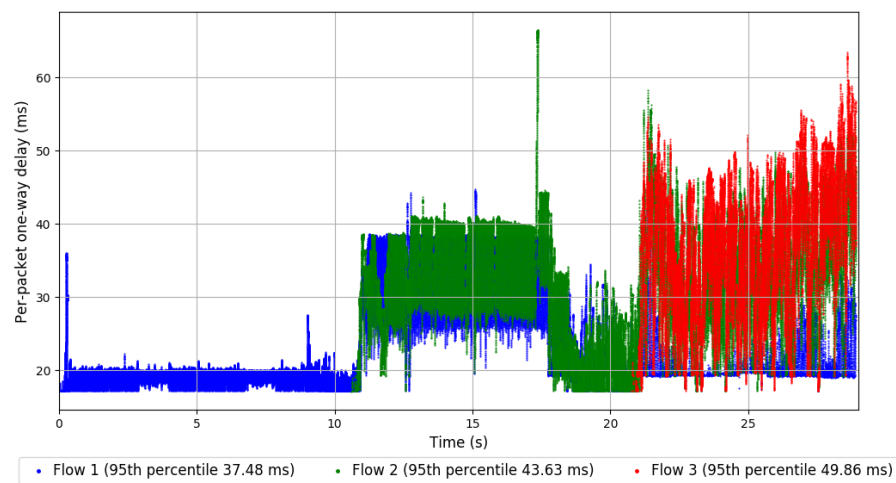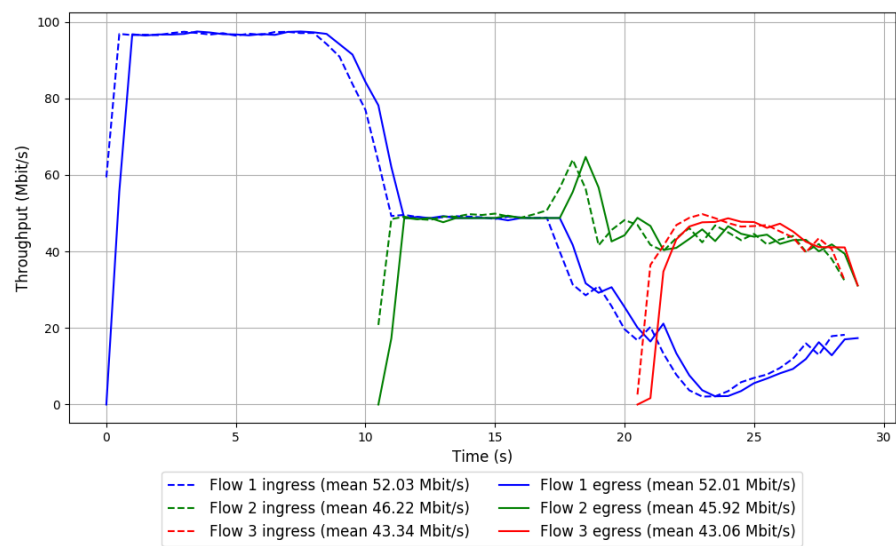
76

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 11:21:13
End at: 2019-05-30 11:21:43
Local clock offset: 2.285 ms
Remote clock offset: -0.93 ms


# Below is generated by plot.py at 2019-05-30 13:18:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.91 Mbit/s
95th percentile per-packet one-way delay: 70.962 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 56.29 Mbit/s
95th percentile per-packet one-way delay: 60.315 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 40.49 Mbit/s
95th percentile per-packet one-way delay: 78.420 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 31.94 Mbit/s
95th percentile per-packet one-way delay: 70.763 ms
Loss rate: 7.85%
```

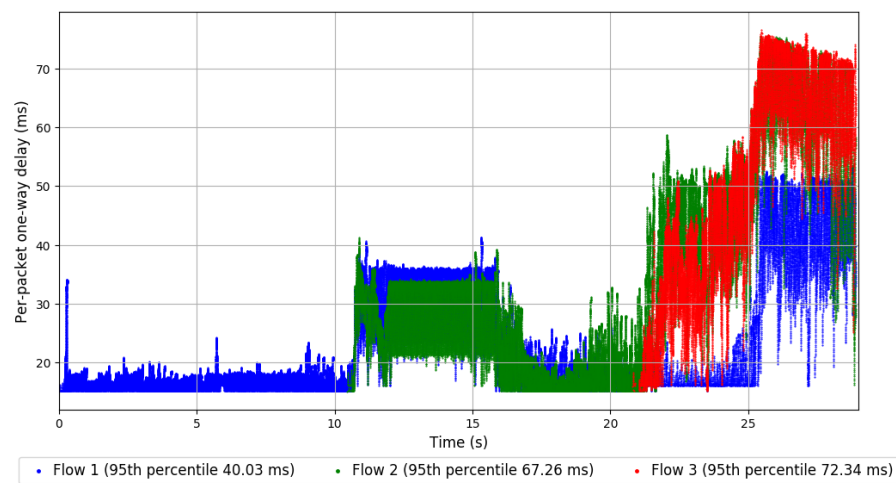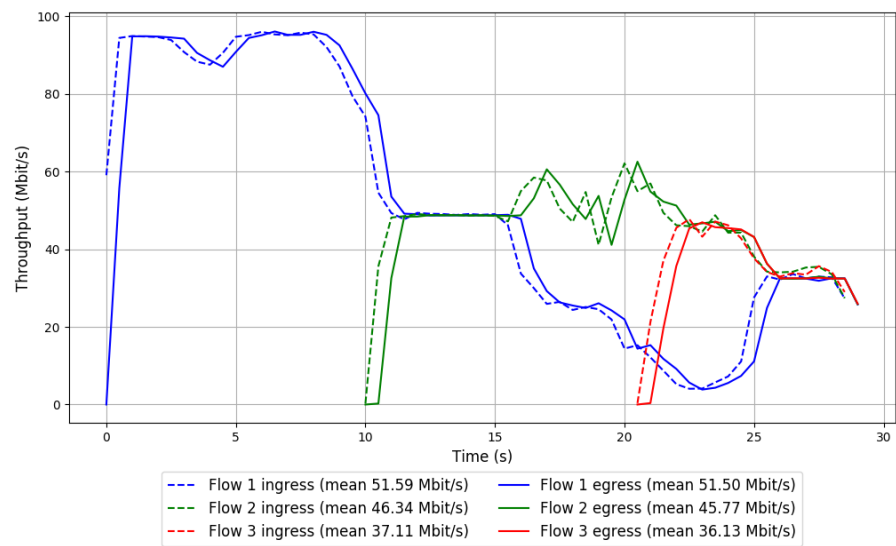Run 2: Report of Indigo-MusesC5 — Data Link
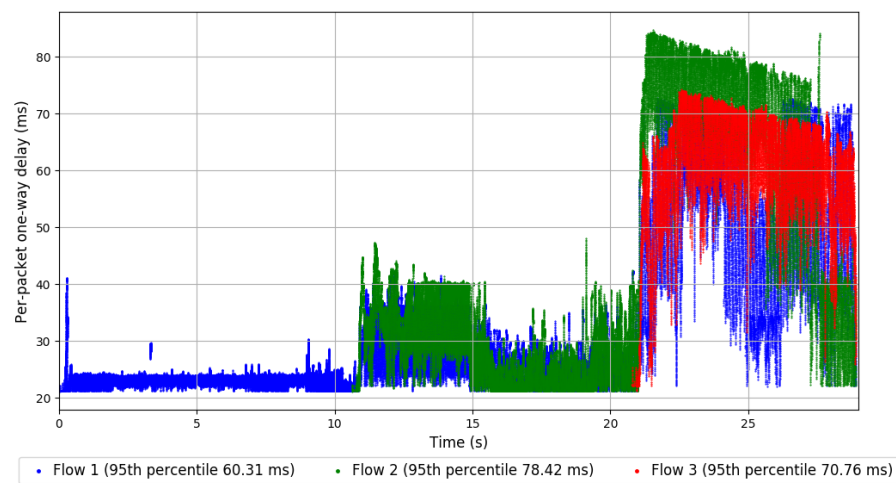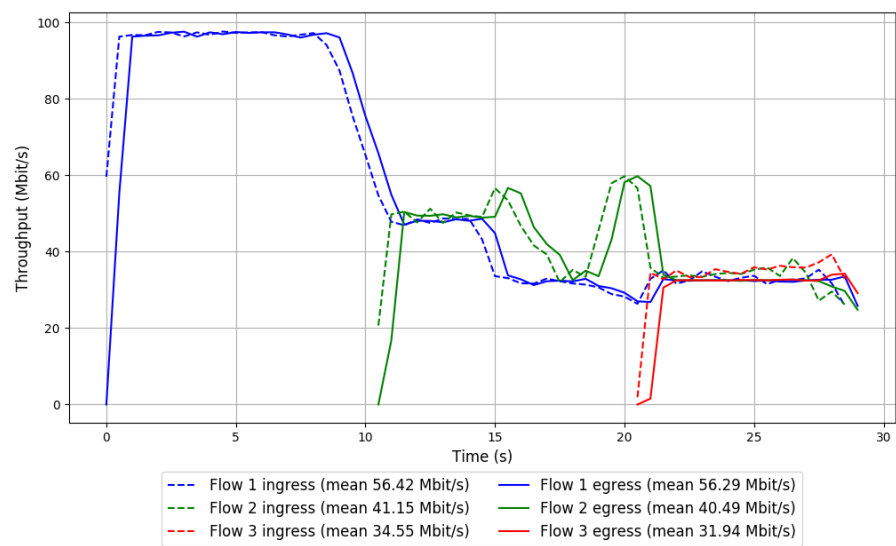
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 11:48:24
End at: 2019-05-30 11:48:54
Local clock offset: 2.143 ms
Remote clock offset: -4.357 ms


# Below is generated by plot.py at 2019-05-30 13:18:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.63 Mbit/s
95th percentile per-packet one-way delay: 61.644 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 52.70 Mbit/s
95th percentile per-packet one-way delay: 51.011 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 64.370 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 37.99 Mbit/s
95th percentile per-packet one-way delay: 73.219 ms
Loss rate: 2.60%
```

Run 3: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 52.94 Mbit/s) ——— Flow 1 egress (mean 52.70 Mbit/s)
- - - - Flow 2 ingress (mean 44.34 Mbit/s) ——— Flow 2 egress (mean 44.05 Mbit/s)
- - - - Flow 3 ingress (mean 38.90 Mbit/s) ——— Flow 3 egress (mean 37.99 Mbit/s)

• Flow 1 (95th percentile 51.01 ms)   • Flow 2 (95th percentile 64.37 ms)   • Flow 3 (95th percentile 73.22 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 12:15:33
End at: 2019-05-30 12:16:03
Local clock offset: -0.83 ms
Remote clock offset: -5.248 ms


# Below is generated by plot.py at 2019-05-30 13:18:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.22 Mbit/s
95th percentile per-packet one-way delay: 43.152 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 52.01 Mbit/s
95th percentile per-packet one-way delay: 37.481 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 43.626 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 43.06 Mbit/s
95th percentile per-packet one-way delay: 49.863 ms
Loss rate: 0.86%
```
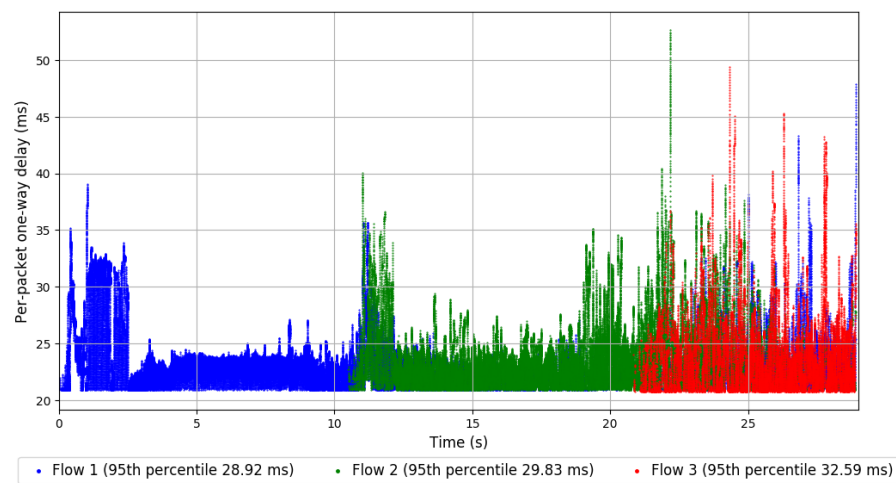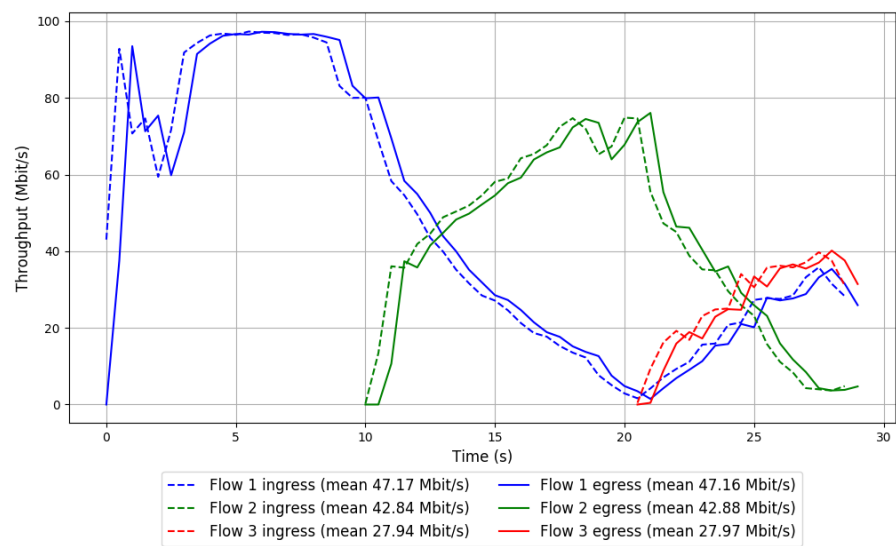
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 12:42:50
End at: 2019-05-30 12:43:20
Local clock offset: -1.95 ms
Remote clock offset: -4.713 ms


# Below is generated by plot.py at 2019-05-30 13:18:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.84 Mbit/s
95th percentile per-packet one-way delay: 63.751 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 51.50 Mbit/s
95th percentile per-packet one-way delay: 40.031 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 45.77 Mbit/s
95th percentile per-packet one-way delay: 67.261 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 36.13 Mbit/s
95th percentile per-packet one-way delay: 72.343 ms
Loss rate: 2.88%
```

Run 5: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 51.59 Mbit/s)   —— Flow 1 egress (mean 51.50 Mbit/s)
- - - Flow 2 ingress (mean 46.34 Mbit/s)   —— Flow 2 egress (mean 45.77 Mbit/s)
- - - Flow 3 ingress (mean 37.11 Mbit/s)   —— Flow 3 egress (mean 36.13 Mbit/s)

• Flow 1 (95th percentile 40.03 ms)   • Flow 2 (95th percentile 67.26 ms)   • Flow 3 (95th percentile 72.34 ms)
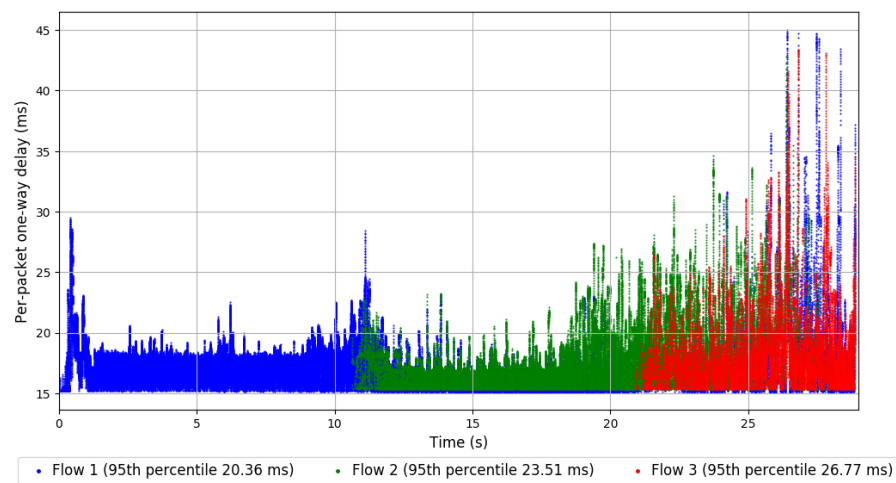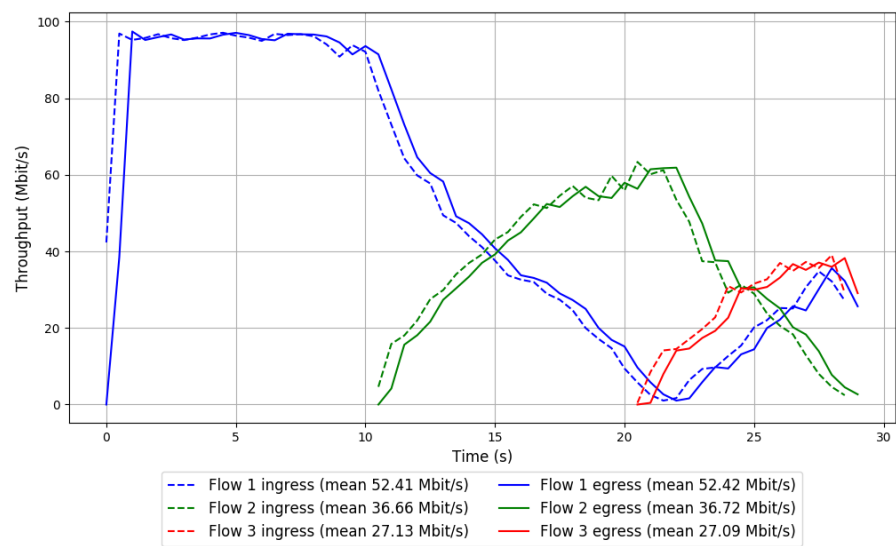
```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 10:57:57
End at: 2019-05-30 10:58:27
Local clock offset: 3.217 ms
Remote clock offset: 0.054 ms


# Below is generated by plot.py at 2019-05-30 13:18:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.33 Mbit/s
95th percentile per-packet one-way delay: 29.694 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 47.16 Mbit/s
95th percentile per-packet one-way delay: 28.916 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 42.88 Mbit/s
95th percentile per-packet one-way delay: 29.827 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 32.592 ms
Loss rate: 0.22%
```

Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 47.17 Mbit/s) --- Flow 1 egress (mean 47.16 Mbit/s)
Flow 2 ingress (mean 42.84 Mbit/s) --- Flow 2 egress (mean 42.88 Mbit/s)
Flow 3 ingress (mean 27.94 Mbit/s) --- Flow 3 egress (mean 27.97 Mbit/s)

Flow 1 (95th percentile 28.92 ms)   Flow 2 (95th percentile 29.83 ms)   Flow 3 (95th percentile 32.59 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 11:25:15
End at: 2019-05-30 11:25:45
Local clock offset: 1.631 ms
Remote clock offset: -2.047 ms


# Below is generated by plot.py at 2019-05-30 13:18:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.72 Mbit/s
95th percentile per-packet one-way delay: 51.123 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 46.72 Mbit/s
95th percentile per-packet one-way delay: 30.062 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 56.98 Mbit/s
95th percentile per-packet one-way delay: 55.987 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 30.777 ms
Loss rate: 0.41%
```

Run 2: Report of Indigo-MusesD — Data Link
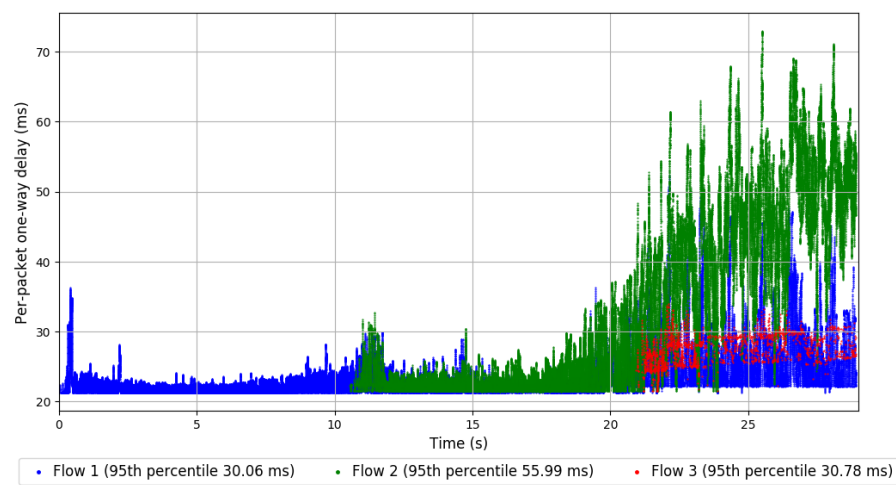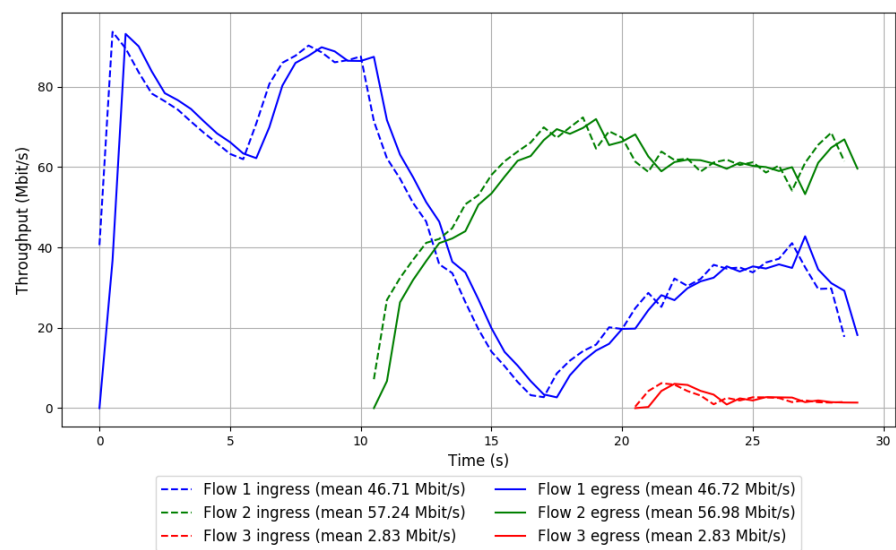
```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 11:52:42
End at: 2019-05-30 11:53:12
Local clock offset: -1.759 ms
Remote clock offset: -2.647 ms


# Below is generated by plot.py at 2019-05-30 13:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.18 Mbit/s
95th percentile per-packet one-way delay: 22.437 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 52.42 Mbit/s
95th percentile per-packet one-way delay: 20.364 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 36.72 Mbit/s
95th percentile per-packet one-way delay: 23.509 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 27.09 Mbit/s
95th percentile per-packet one-way delay: 26.772 ms
Loss rate: 0.40%
```

Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 12:19:25
End at: 2019-05-30 12:19:55
Local clock offset: 3.124 ms
Remote clock offset: -6.118 ms


# Below is generated by plot.py at 2019-05-30 13:18:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.07 Mbit/s
95th percentile per-packet one-way delay: 82.104 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 46.52 Mbit/s
95th percentile per-packet one-way delay: 39.685 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 109.297 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 41.413 ms
Loss rate: 0.36%
```
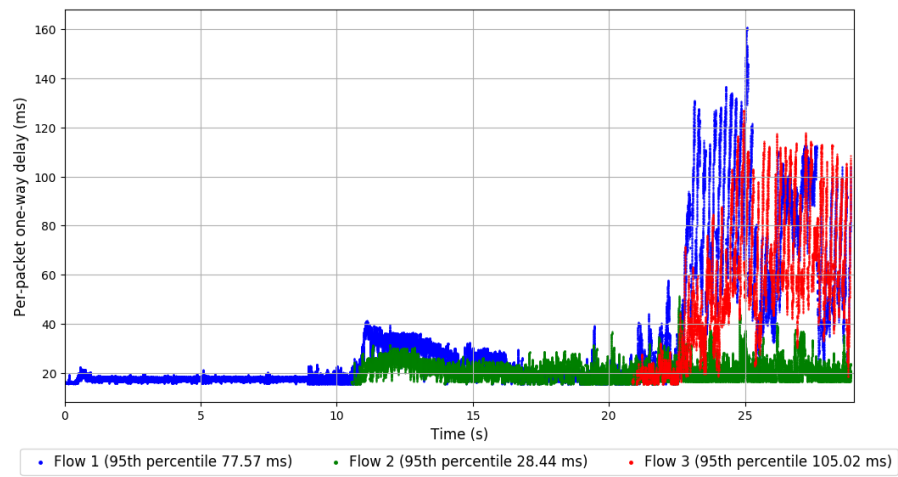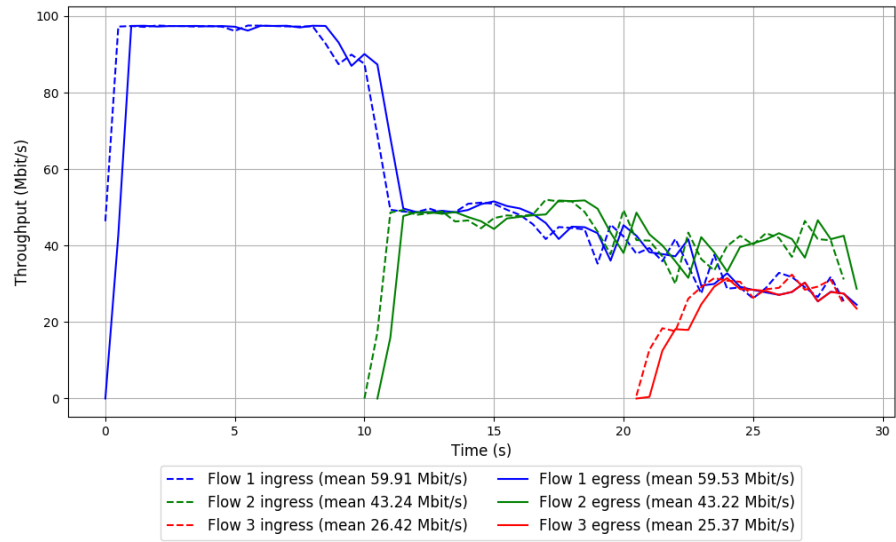
Run 4: Report of Indigo-MusesD — Data Link
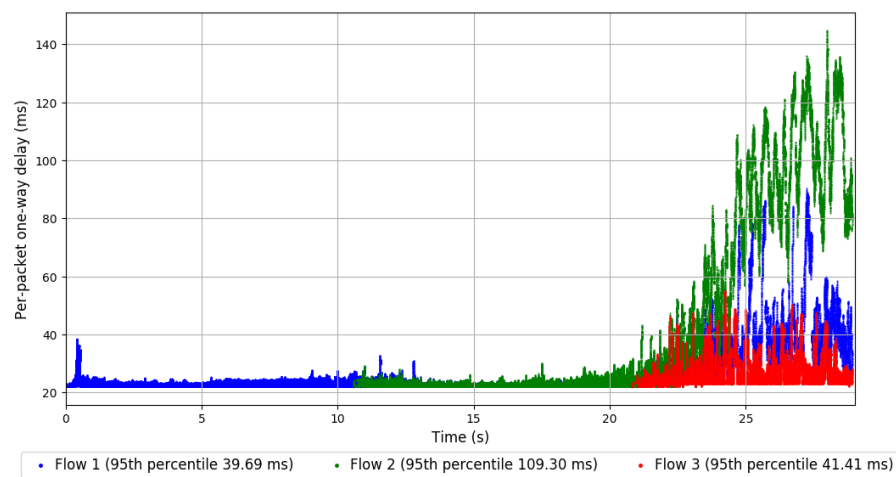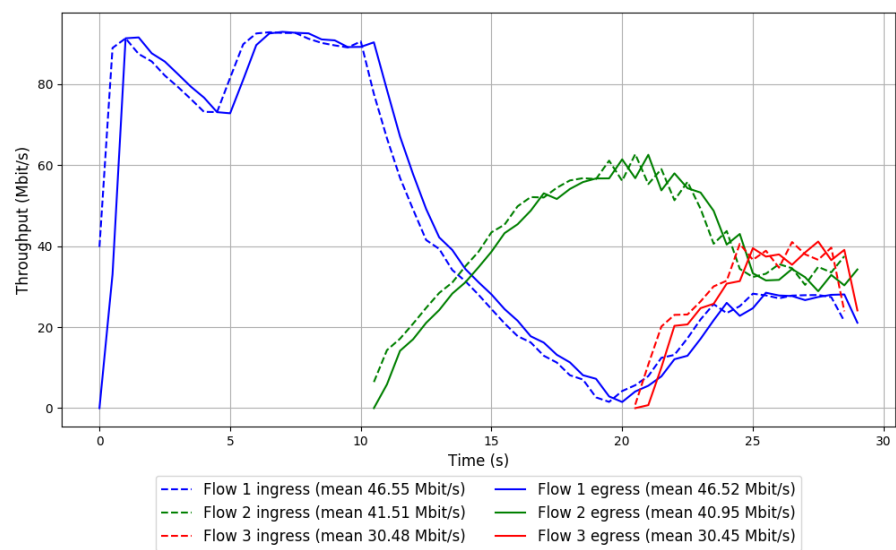
```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 12:46:50
End at: 2019-05-30 12:47:20
Local clock offset: -1.374 ms
Remote clock offset: -6.367 ms


# Below is generated by plot.py at 2019-05-30 13:18:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.89 Mbit/s
95th percentile per-packet one-way delay: 99.860 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 61.33 Mbit/s
95th percentile per-packet one-way delay: 108.135 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 20.59 Mbit/s
95th percentile per-packet one-way delay: 38.262 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 26.66 Mbit/s
95th percentile per-packet one-way delay: 31.574 ms
Loss rate: 0.29%
```
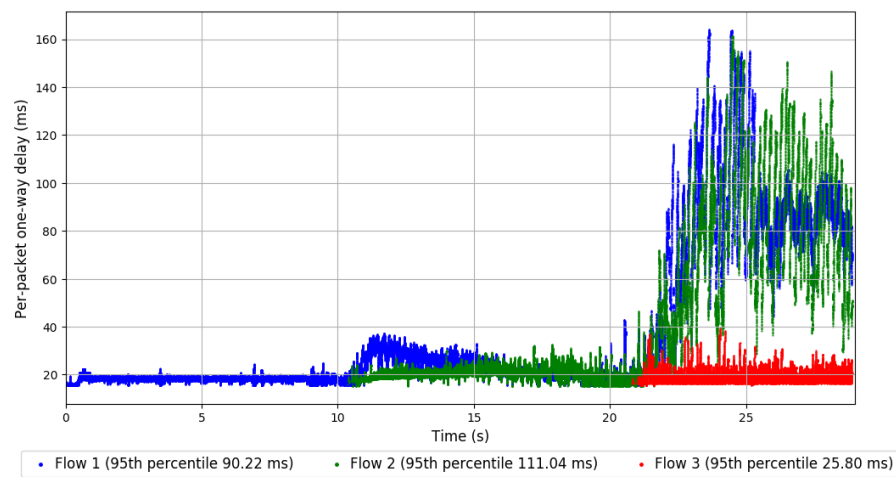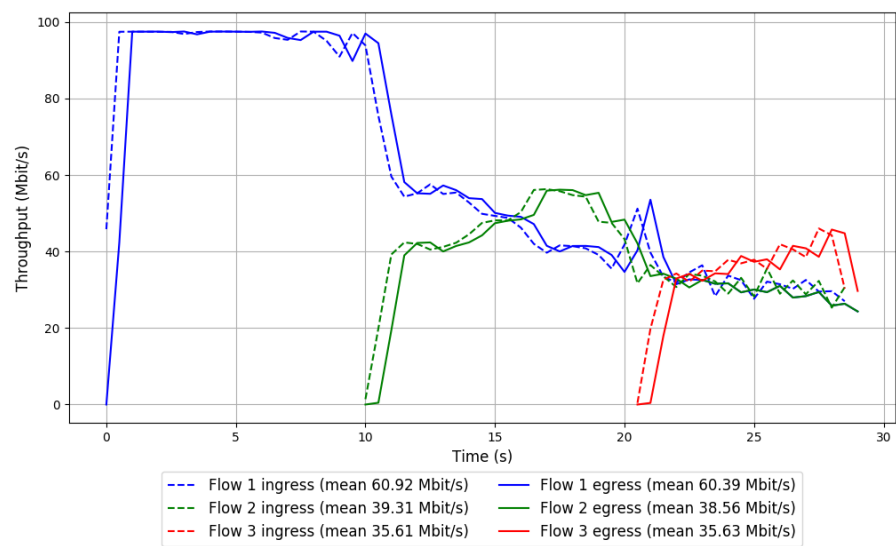
Run 5: Report of Indigo-MusesD — Data Link
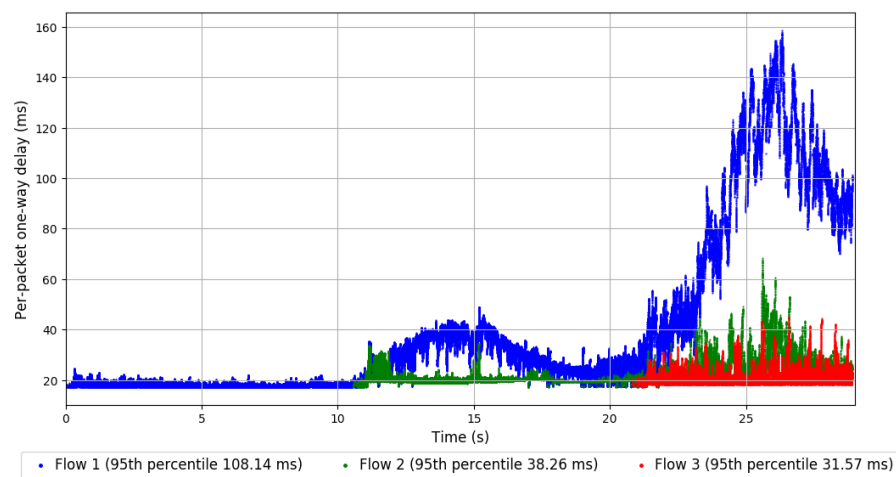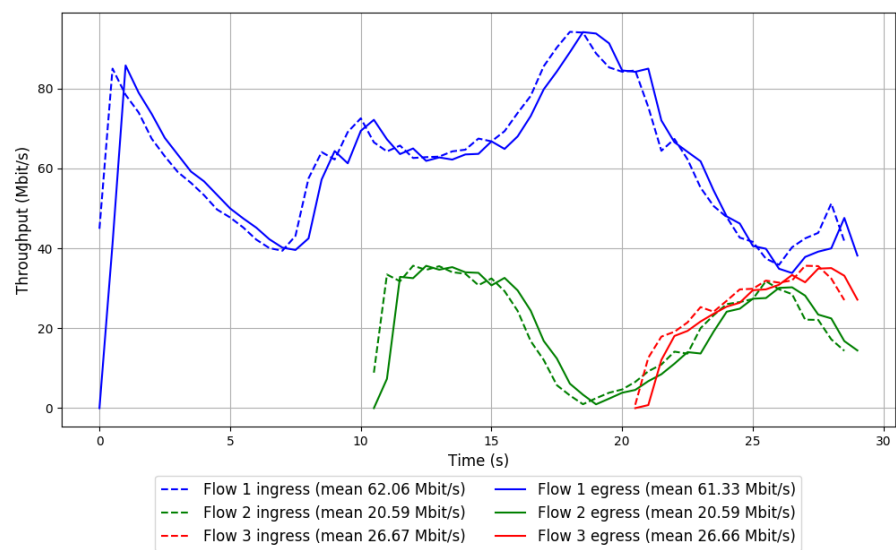
```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-05-30 11:05:18
End at: 2019-05-30 11:05:48
Local clock offset: -1.102 ms
Remote clock offset: 1.204 ms

# Below is generated by plot.py at 2019-05-30 13:19:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 77.440 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 77.566 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 28.436 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 25.37 Mbit/s
95th percentile per-packet one-way delay: 105.021 ms
Loss rate: 4.25%
```

Run 1: Report of Indigo-MusesT — Data Link

- - - - Flow 1 ingress (mean 59.91 Mbit/s) ——— Flow 1 egress (mean 59.53 Mbit/s)
- - - - Flow 2 ingress (mean 43.24 Mbit/s) ——— Flow 2 egress (mean 43.22 Mbit/s)
- - - - Flow 3 ingress (mean 26.42 Mbit/s) ——— Flow 3 egress (mean 25.37 Mbit/s)

- Flow 1 (95th percentile 77.57 ms)   • Flow 2 (95th percentile 28.44 ms)   • Flow 3 (95th percentile 105.02 ms)
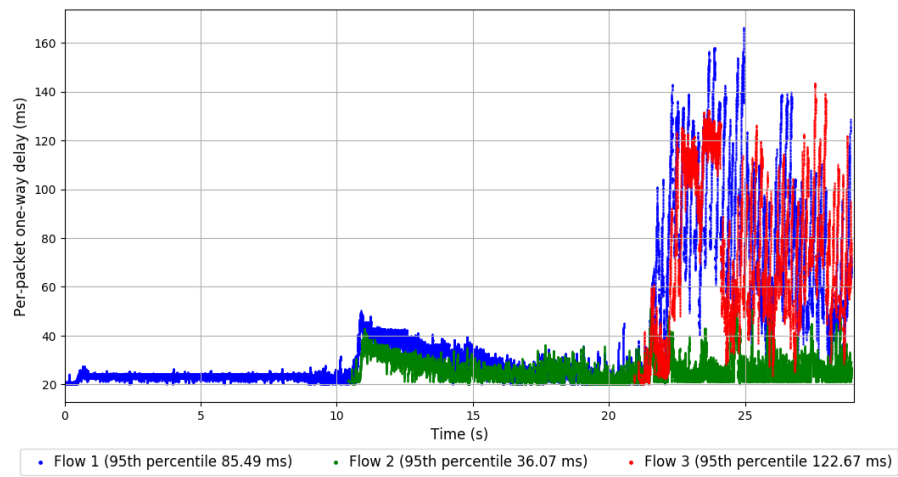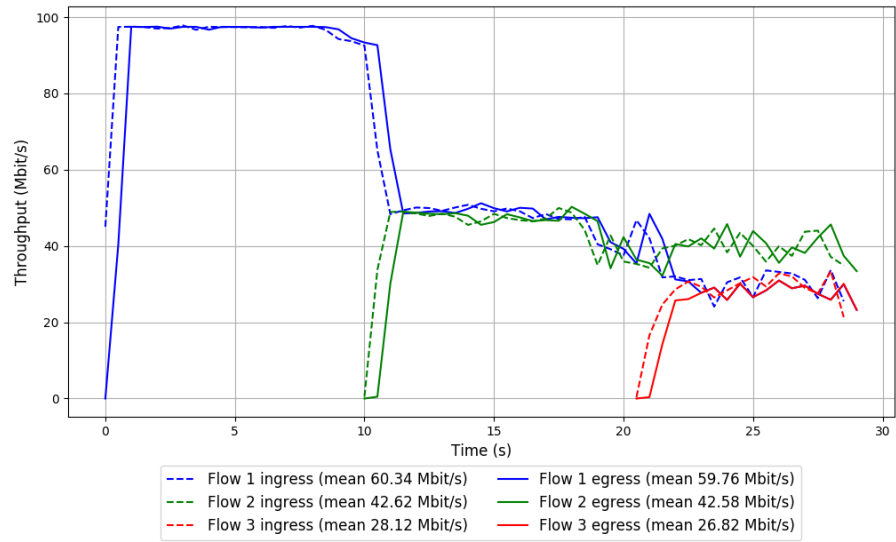
```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-05-30 11:32:51
End at: 2019-05-30 11:33:21
Local clock offset: -2.47 ms
Remote clock offset: -0.937 ms


# Below is generated by plot.py at 2019-05-30 13:19:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.50 Mbit/s
95th percentile per-packet one-way delay: 74.659 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 60.04 Mbit/s
95th percentile per-packet one-way delay: 61.709 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 87.596 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 28.27 Mbit/s
95th percentile per-packet one-way delay: 82.238 ms
Loss rate: 2.74%
```
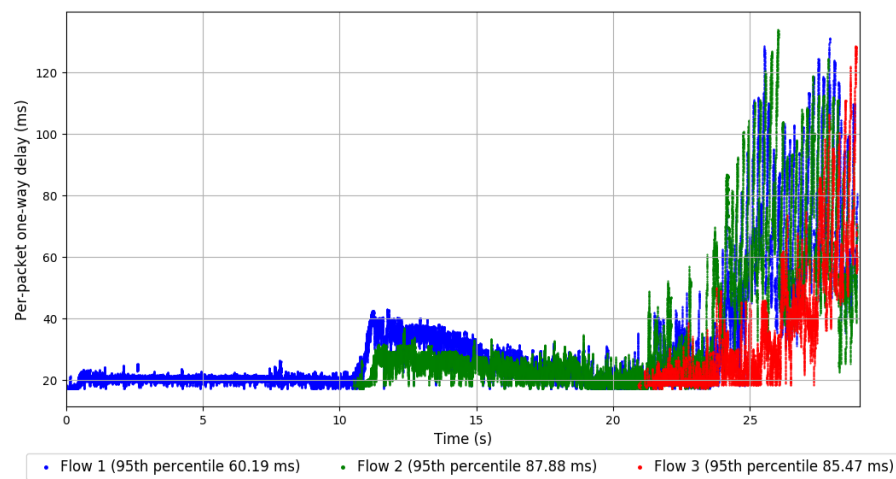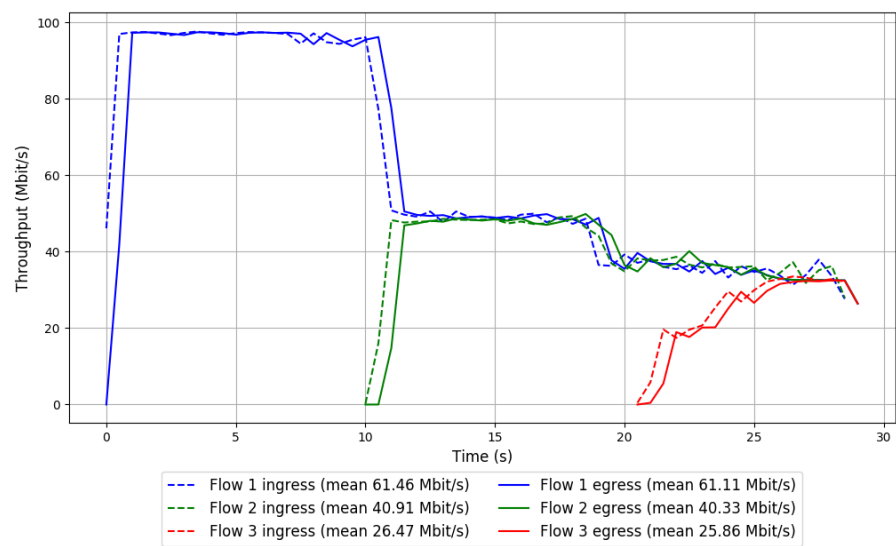
Run 2: Report of Indigo-MusesT — Data Link

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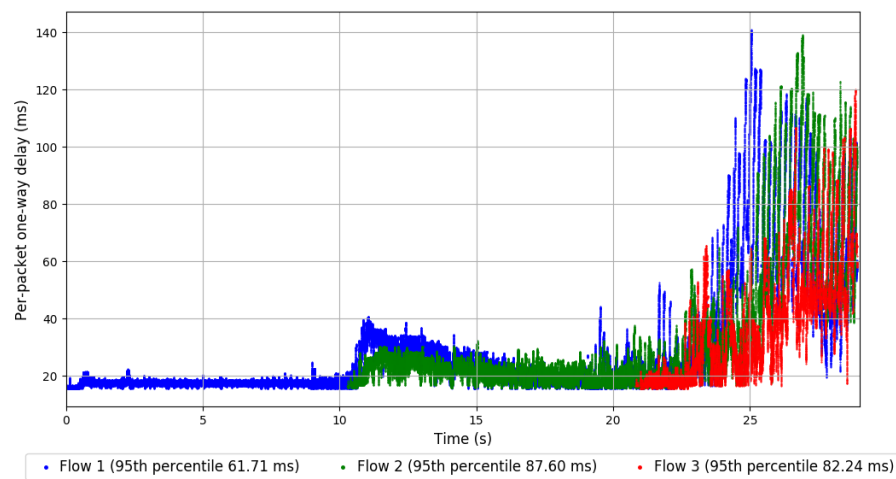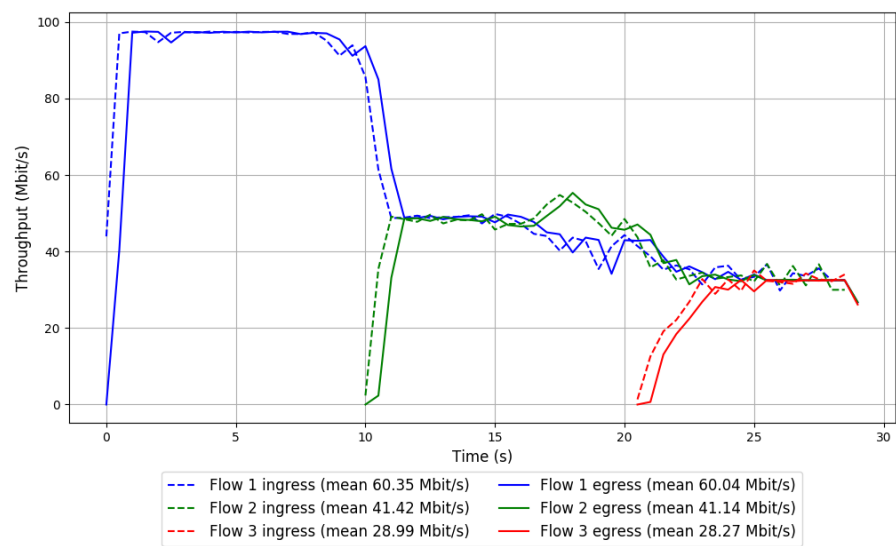
```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-05-30 12:00:18
End at: 2019-05-30 12:00:48
Local clock offset: -2.025 ms
Remote clock offset: -3.732 ms


# Below is generated by plot.py at 2019-05-30 13:19:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 94.227 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 60.39 Mbit/s
95th percentile per-packet one-way delay: 90.216 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 38.56 Mbit/s
95th percentile per-packet one-way delay: 111.037 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 35.63 Mbit/s
95th percentile per-packet one-way delay: 25.798 ms
Loss rate: 0.33%
```

Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-05-30 12:26:50
End at: 2019-05-30 12:27:20
Local clock offset: 3.145 ms
Remote clock offset: -4.916 ms


# Below is generated by plot.py at 2019-05-30 13:19:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.48 Mbit/s
95th percentile per-packet one-way delay: 91.863 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 59.76 Mbit/s
95th percentile per-packet one-way delay: 85.493 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 42.58 Mbit/s
95th percentile per-packet one-way delay: 36.074 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 26.82 Mbit/s
95th percentile per-packet one-way delay: 122.673 ms
Loss rate: 4.95%
```

# Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 60.34 Mbit/s) --- Flow 1 egress (mean 59.76 Mbit/s)
Flow 2 ingress (mean 42.62 Mbit/s) --- Flow 2 egress (mean 42.58 Mbit/s)
Flow 3 ingress (mean 28.12 Mbit/s) --- Flow 3 egress (mean 26.82 Mbit/s)

Flow 1 (95th percentile 85.49 ms) Flow 2 (95th percentile 36.07 ms) Flow 3 (95th percentile 122.67 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-05-30 12:54:29
End at: 2019-05-30 12:54:59
Local clock offset: -3.008 ms
Remote clock offset: -7.835 ms


# Below is generated by plot.py at 2019-05-30 13:19:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.98 Mbit/s
95th percentile per-packet one-way delay: 74.329 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 61.11 Mbit/s
95th percentile per-packet one-way delay: 60.188 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 40.33 Mbit/s
95th percentile per-packet one-way delay: 87.884 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 25.86 Mbit/s
95th percentile per-packet one-way delay: 85.468 ms
Loss rate: 2.62%
```

Run 5: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 61.46 Mbit/s)　　Flow 1 egress (mean 61.11 Mbit/s)
Flow 2 ingress (mean 40.91 Mbit/s)　　Flow 2 egress (mean 40.33 Mbit/s)
Flow 3 ingress (mean 26.47 Mbit/s)　　Flow 3 egress (mean 25.86 Mbit/s)

Flow 1 (95th percentile 60.19 ms)　　Flow 2 (95th percentile 87.88 ms)　　Flow 3 (95th percentile 85.47 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-05-30 11:06:35
End at: 2019-05-30 11:07:05
Local clock offset: -1.124 ms
Remote clock offset: 0.622 ms

# Below is generated by plot.py at 2019-05-30 13:19:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.06 Mbit/s
95th percentile per-packet one-way delay: 27.176 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 53.38 Mbit/s
95th percentile per-packet one-way delay: 26.454 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 38.72 Mbit/s
95th percentile per-packet one-way delay: 28.301 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 29.80 Mbit/s
95th percentile per-packet one-way delay: 27.714 ms
Loss rate: 0.37%
```
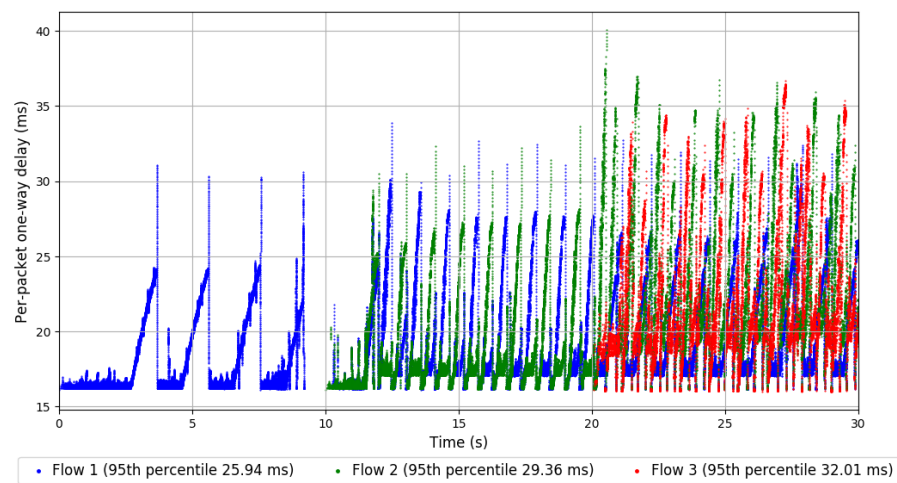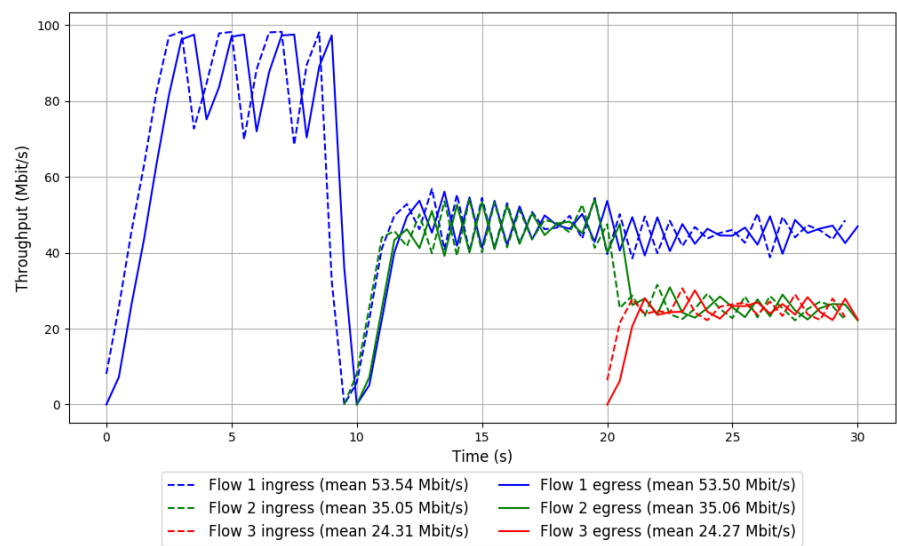
Run 1: Report of LEDBAT — Data Link
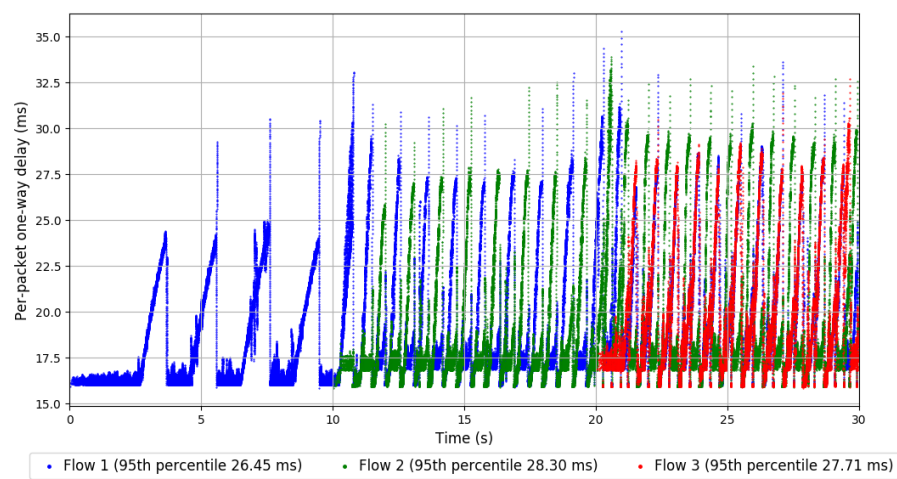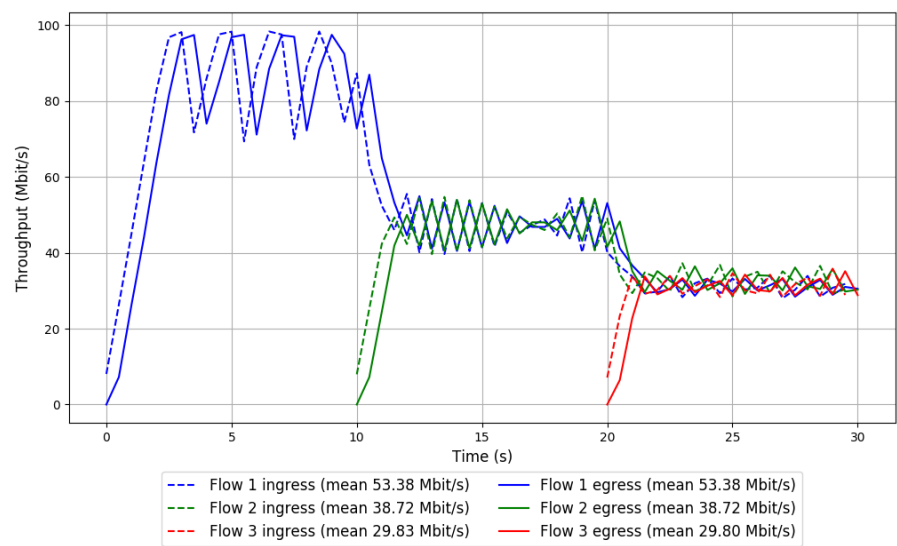
```
Run 2: Statistics of LEDBAT

Start at: 2019-05-30 11:34:07
End at: 2019-05-30 11:34:37
Local clock offset: -2.883 ms
Remote clock offset: -1.25 ms


# Below is generated by plot.py at 2019-05-30 13:19:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 27.241 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 26.878 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 35.31 Mbit/s
95th percentile per-packet one-way delay: 28.636 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 42.10 Mbit/s
95th percentile per-packet one-way delay: 26.718 ms
Loss rate: 0.41%
```
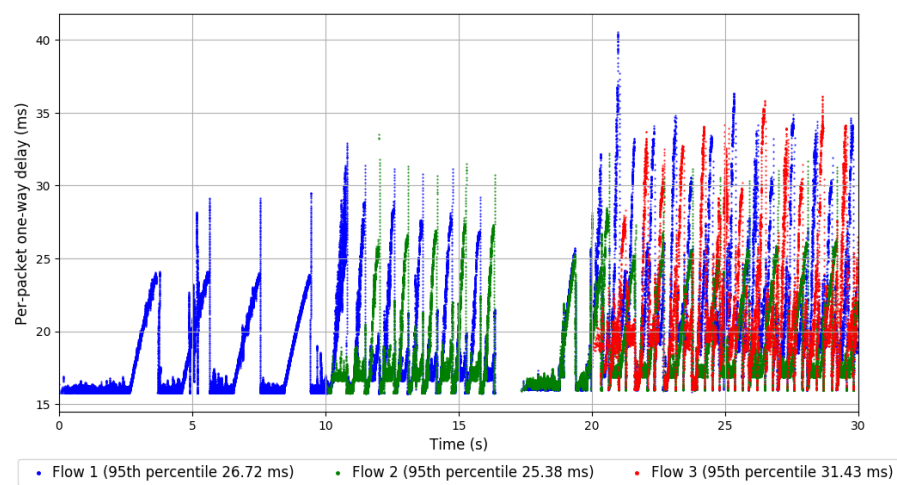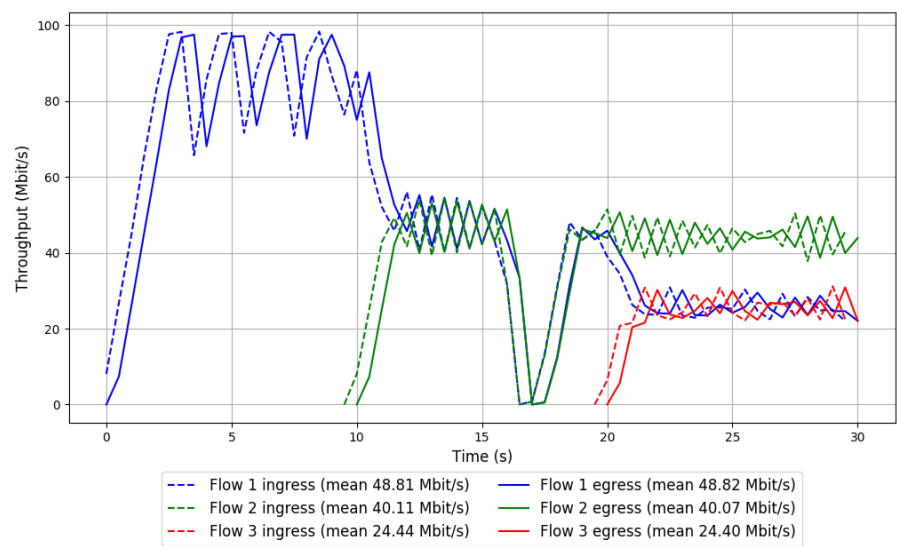
Run 2: Report of LEDBAT — Data Link
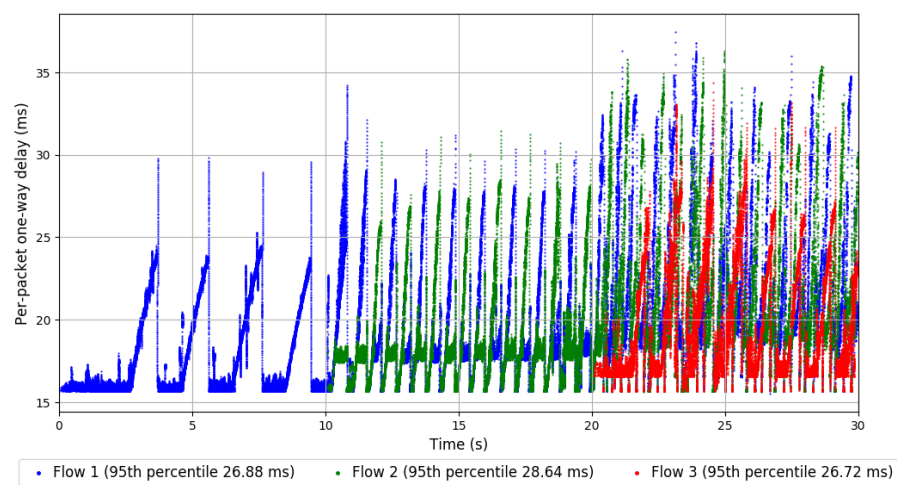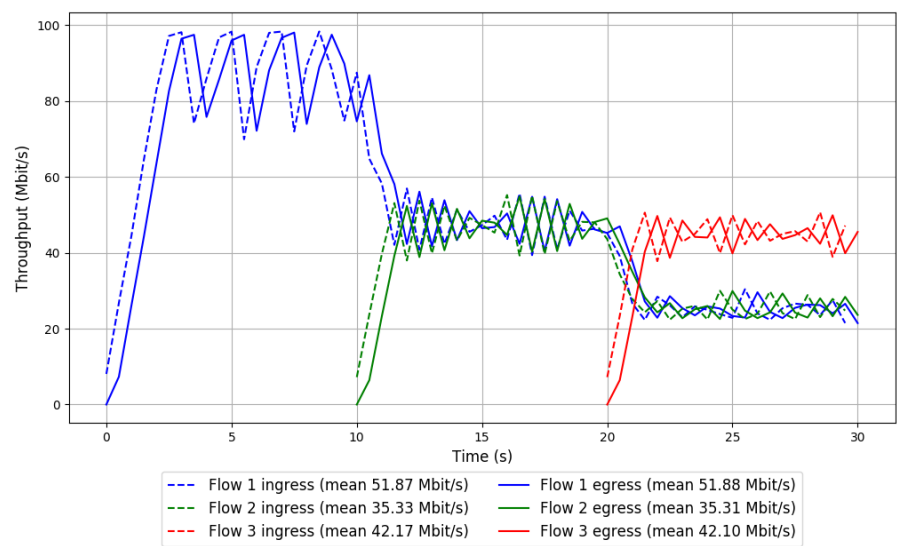
```
Run 3: Statistics of LEDBAT

Start at: 2019-05-30 12:01:34
End at: 2019-05-30 12:02:04
Local clock offset: -0.461 ms
Remote clock offset: -3.038 ms


# Below is generated by plot.py at 2019-05-30 13:19:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.91 Mbit/s
95th percentile per-packet one-way delay: 27.324 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 53.50 Mbit/s
95th percentile per-packet one-way delay: 25.940 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 35.06 Mbit/s
95th percentile per-packet one-way delay: 29.358 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 32.014 ms
Loss rate: 0.43%
```
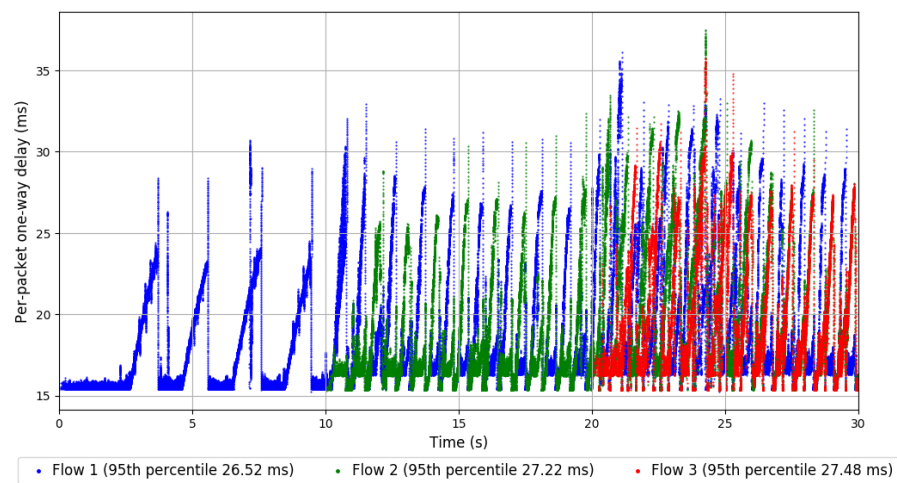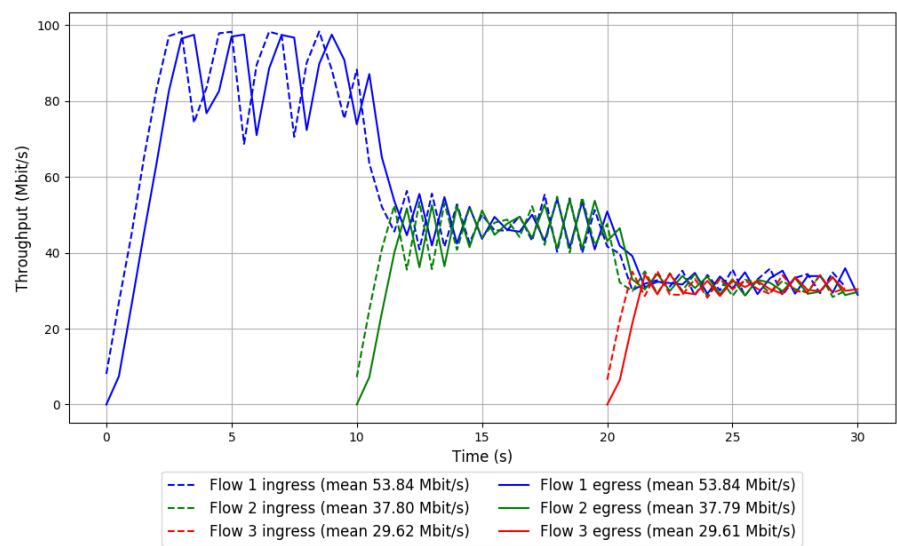
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 53.54 Mbit/s) — Flow 1 egress (mean 53.50 Mbit/s)
Flow 2 ingress (mean 35.05 Mbit/s) — Flow 2 egress (mean 35.06 Mbit/s)
Flow 3 ingress (mean 24.31 Mbit/s) — Flow 3 egress (mean 24.27 Mbit/s)

Flow 1 (95th percentile 25.94 ms)   Flow 2 (95th percentile 29.36 ms)   Flow 3 (95th percentile 32.01 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-05-30 12:28:05
End at: 2019-05-30 12:28:35
Local clock offset: -1.005 ms
Remote clock offset: -4.669 ms


# Below is generated by plot.py at 2019-05-30 13:20:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.62 Mbit/s
95th percentile per-packet one-way delay: 26.790 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 48.82 Mbit/s
95th percentile per-packet one-way delay: 26.724 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 40.07 Mbit/s
95th percentile per-packet one-way delay: 25.382 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 24.40 Mbit/s
95th percentile per-packet one-way delay: 31.433 ms
Loss rate: 0.45%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 48.81 Mbit/s) --- Flow 1 egress (mean 48.82 Mbit/s)
Flow 2 ingress (mean 40.11 Mbit/s) --- Flow 2 egress (mean 40.07 Mbit/s)
Flow 3 ingress (mean 24.44 Mbit/s) --- Flow 3 egress (mean 24.40 Mbit/s)

Flow 1 (95th percentile 26.72 ms)   Flow 2 (95th percentile 25.38 ms)   Flow 3 (95th percentile 31.43 ms)

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```
Run 5: Statistics of LEDBAT

Start at: 2019-05-30 12:55:46
End at: 2019-05-30 12:56:16
Local clock offset: -3.204 ms
Remote clock offset: -6.071 ms


# Below is generated by plot.py at 2019-05-30 13:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.81 Mbit/s
95th percentile per-packet one-way delay: 26.965 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 53.84 Mbit/s
95th percentile per-packet one-way delay: 26.517 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 37.79 Mbit/s
95th percentile per-packet one-way delay: 27.217 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 27.477 ms
Loss rate: 0.29%
```
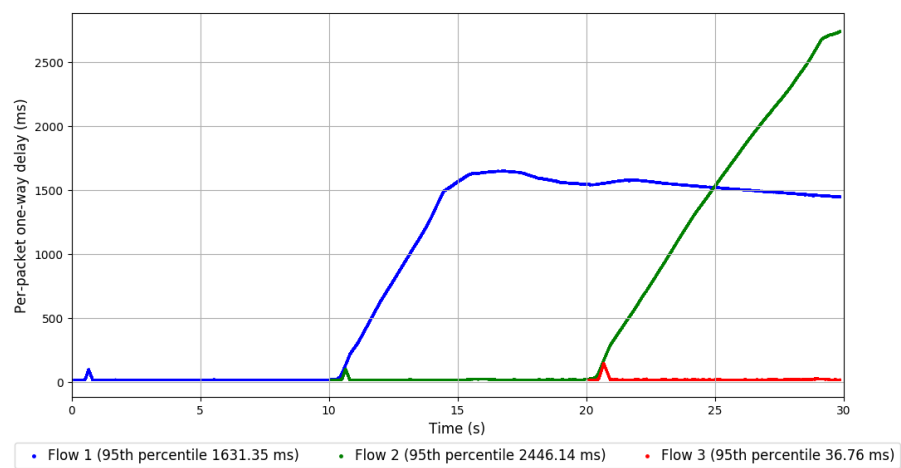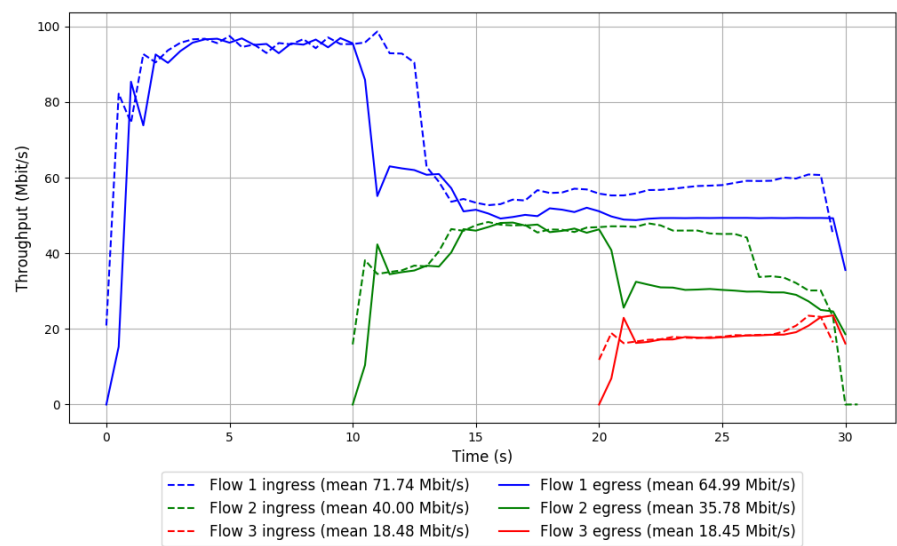
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 53.84 Mbit/s)   Flow 1 egress (mean 53.84 Mbit/s)
Flow 2 ingress (mean 37.80 Mbit/s)   Flow 2 egress (mean 37.79 Mbit/s)
Flow 3 ingress (mean 29.62 Mbit/s)   Flow 3 egress (mean 29.61 Mbit/s)

Flow 1 (95th percentile 26.52 ms)   Flow 2 (95th percentile 27.22 ms)   Flow 3 (95th percentile 27.48 ms)
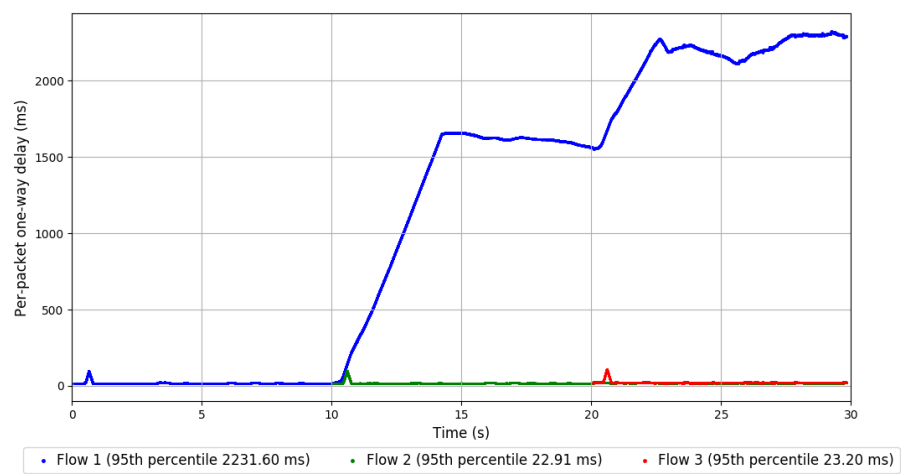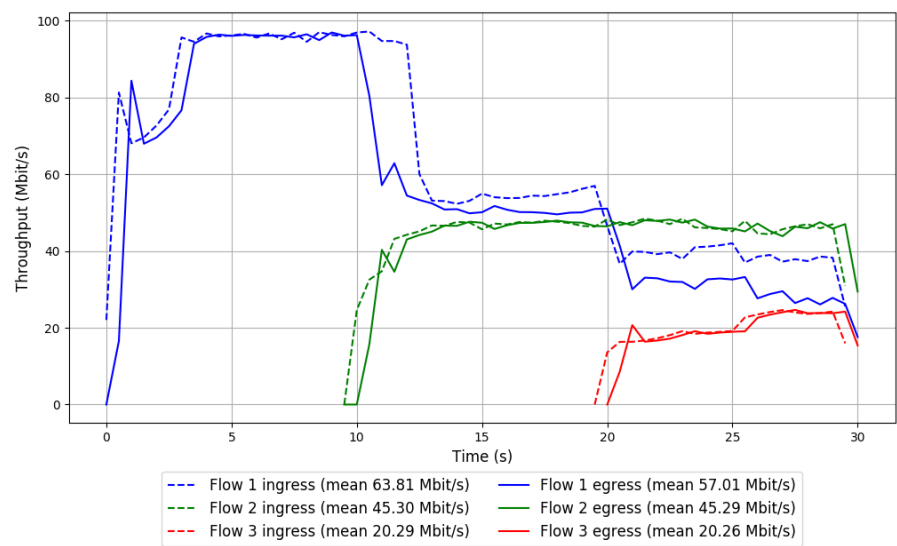
```
Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 11:19:56
End at: 2019-05-30 11:20:26
Local clock offset: -2.429 ms
Remote clock offset: 0.481 ms


# Below is generated by plot.py at 2019-05-30 13:20:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.35 Mbit/s
95th percentile per-packet one-way delay: 2201.414 ms
Loss rate: 6.85%
-- Flow 1:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 2222.777 ms
Loss rate: 10.54%
-- Flow 2:
Average throughput: 43.75 Mbit/s
95th percentile per-packet one-way delay: 22.385 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 19.90 Mbit/s
95th percentile per-packet one-way delay: 23.332 ms
Loss rate: 0.33%
```
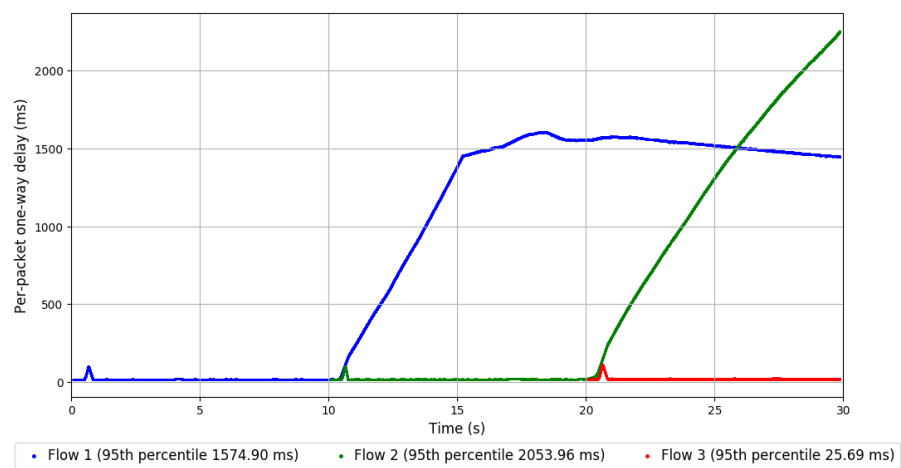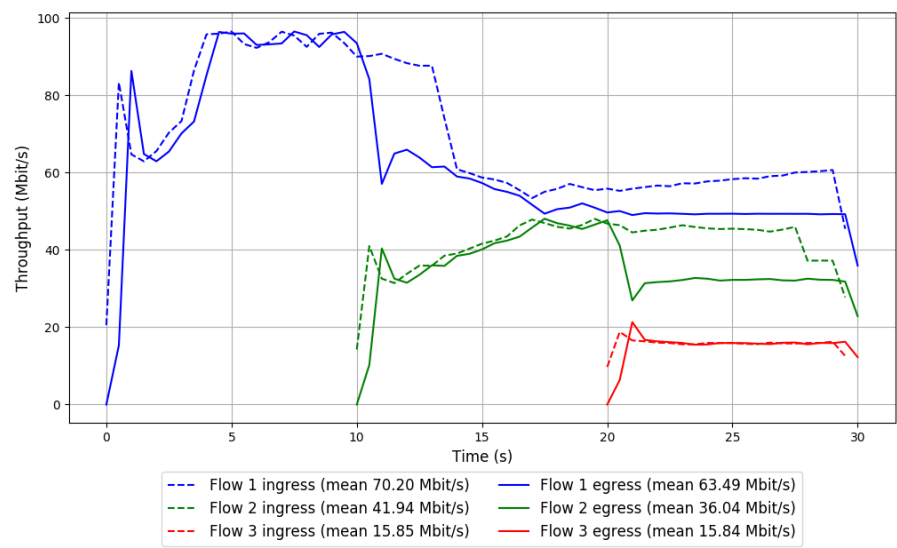
Run 1: Report of PCC-Allegro — Data Link
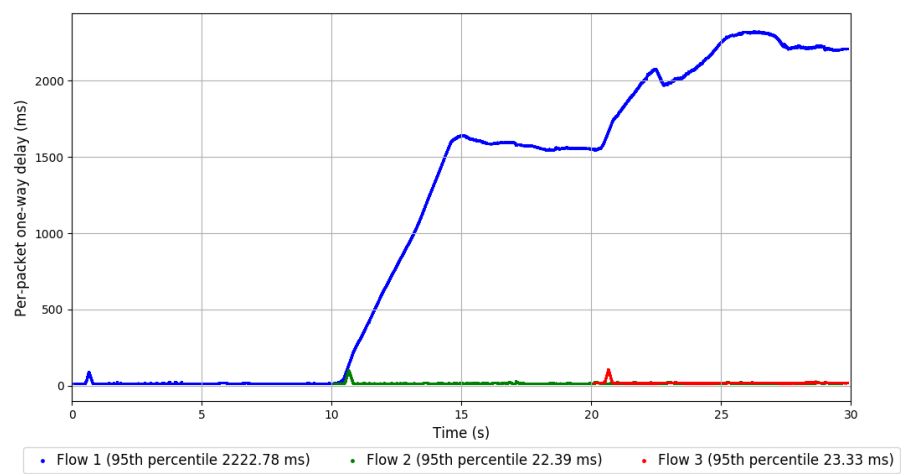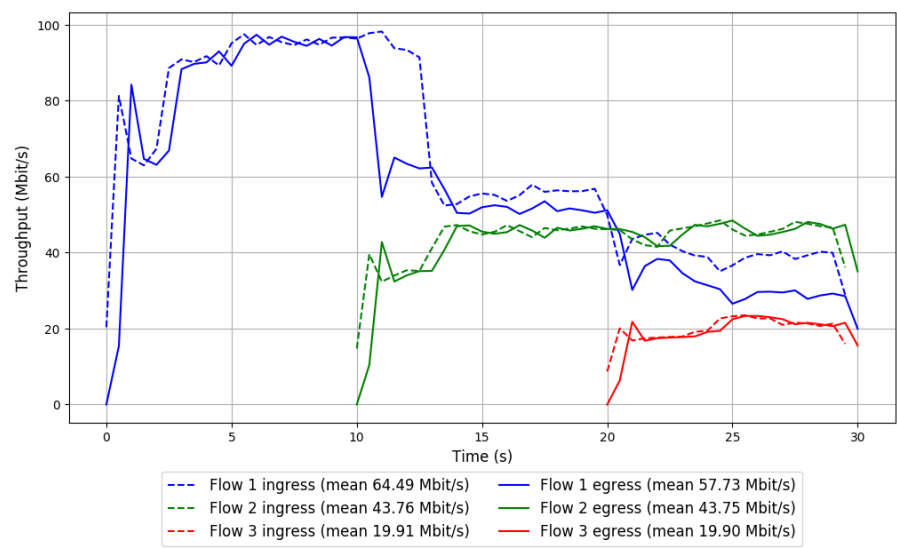
```
Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 11:47:09
End at: 2019-05-30 11:47:39
Local clock offset: -1.217 ms
Remote clock offset: -3.908 ms


# Below is generated by plot.py at 2019-05-30 13:20:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.83 Mbit/s
95th percentile per-packet one-way delay: 1647.784 ms
Loss rate: 10.16%
-- Flow 1:
Average throughput: 64.99 Mbit/s
95th percentile per-packet one-way delay: 1631.350 ms
Loss rate: 9.48%
-- Flow 2:
Average throughput: 35.78 Mbit/s
95th percentile per-packet one-way delay: 2446.137 ms
Loss rate: 14.08%
-- Flow 3:
Average throughput: 18.45 Mbit/s
95th percentile per-packet one-way delay: 36.755 ms
Loss rate: 0.39%
```
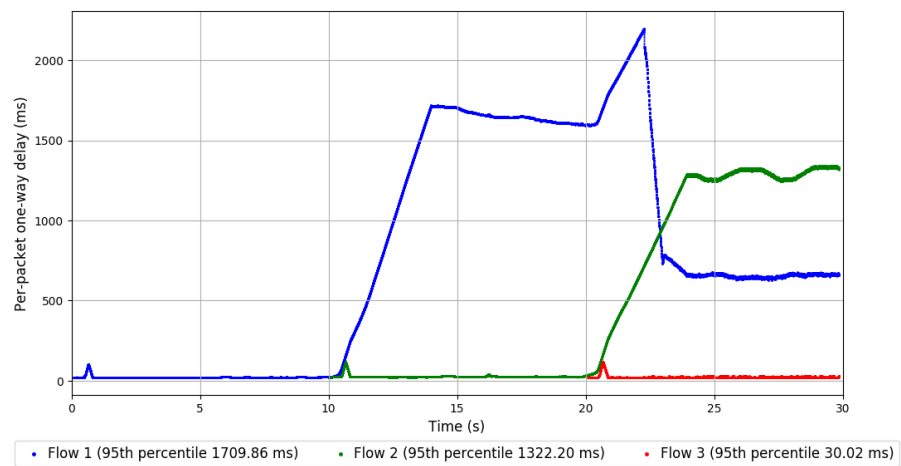
Run 2: Report of PCC-Allegro — Data Link

- - - - Flow 1 ingress (mean 71.74 Mbit/s) ——— Flow 1 egress (mean 64.99 Mbit/s)
- - - - Flow 2 ingress (mean 40.00 Mbit/s) ——— Flow 2 egress (mean 35.78 Mbit/s)
- - - - Flow 3 ingress (mean 18.48 Mbit/s) ——— Flow 3 egress (mean 18.45 Mbit/s)

• Flow 1 (95th percentile 1631.35 ms)   • Flow 2 (95th percentile 2446.14 ms)   • Flow 3 (95th percentile 36.76 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 12:14:20
End at: 2019-05-30 12:14:50
Local clock offset: -0.893 ms
Remote clock offset: -3.445 ms


# Below is generated by plot.py at 2019-05-30 13:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.83 Mbit/s
95th percentile per-packet one-way delay: 2198.435 ms
Loss rate: 6.88%
-- Flow 1:
Average throughput: 57.01 Mbit/s
95th percentile per-packet one-way delay: 2231.600 ms
Loss rate: 10.73%
-- Flow 2:
Average throughput: 45.29 Mbit/s
95th percentile per-packet one-way delay: 22.909 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 20.26 Mbit/s
95th percentile per-packet one-way delay: 23.195 ms
Loss rate: 0.39%
```

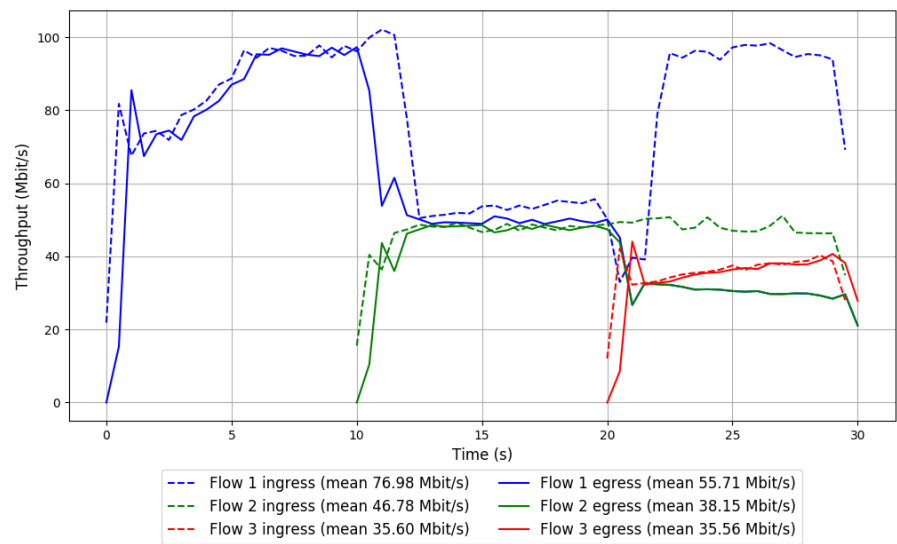Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 63.81 Mbit/s)   Flow 1 egress (mean 57.01 Mbit/s)
Flow 2 ingress (mean 45.30 Mbit/s)   Flow 2 egress (mean 45.29 Mbit/s)
Flow 3 ingress (mean 20.29 Mbit/s)   Flow 3 egress (mean 20.26 Mbit/s)

Flow 1 (95th percentile 2231.60 ms)   Flow 2 (95th percentile 22.91 ms)   Flow 3 (95th percentile 23.20 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 12:41:33
End at: 2019-05-30 12:42:03
Local clock offset: -1.157 ms
Remote clock offset: -5.274 ms


# Below is generated by plot.py at 2019-05-30 13:20:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.65 Mbit/s
95th percentile per-packet one-way delay: 1599.355 ms
Loss rate: 10.39%
-- Flow 1:
Average throughput: 63.49 Mbit/s
95th percentile per-packet one-way delay: 1574.903 ms
Loss rate: 9.63%
-- Flow 2:
Average throughput: 36.04 Mbit/s
95th percentile per-packet one-way delay: 2053.960 ms
Loss rate: 14.17%
-- Flow 3:
Average throughput: 15.84 Mbit/s
95th percentile per-packet one-way delay: 25.692 ms
Loss rate: 0.33%
```

Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 70.20 Mbit/s) --- Flow 1 egress (mean 63.49 Mbit/s)
Flow 2 ingress (mean 41.94 Mbit/s) --- Flow 2 egress (mean 36.04 Mbit/s)
Flow 3 ingress (mean 15.85 Mbit/s) --- Flow 3 egress (mean 15.84 Mbit/s)

Flow 1 (95th percentile 1574.90 ms)   Flow 2 (95th percentile 2053.96 ms)   Flow 3 (95th percentile 25.69 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 13:09:01
End at: 2019-05-30 13:09:31
Local clock offset: 1.746 ms
Remote clock offset: -5.325 ms


# Below is generated by plot.py at 2019-05-30 13:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.77 Mbit/s
95th percentile per-packet one-way delay: 1675.913 ms
Loss rate: 22.66%
-- Flow 1:
Average throughput: 55.71 Mbit/s
95th percentile per-packet one-way delay: 1709.857 ms
Loss rate: 27.69%
-- Flow 2:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 1322.198 ms
Loss rate: 18.61%
-- Flow 3:
Average throughput: 35.56 Mbit/s
95th percentile per-packet one-way delay: 30.018 ms
Loss rate: 0.38%
```

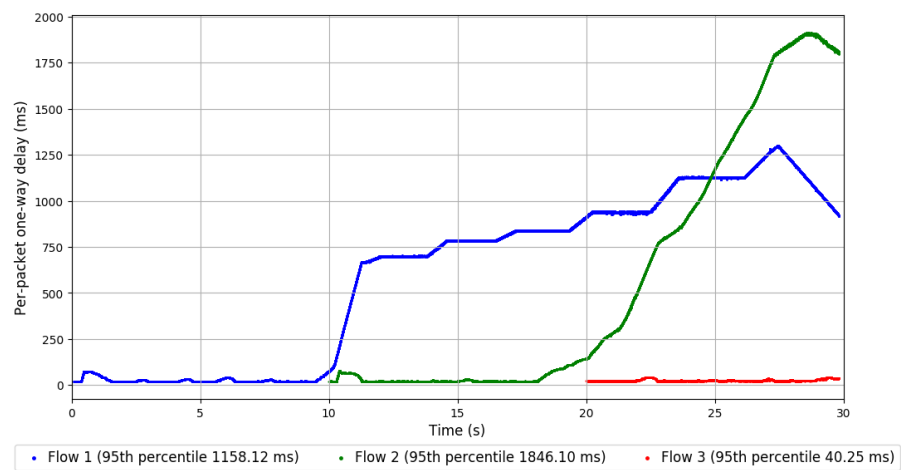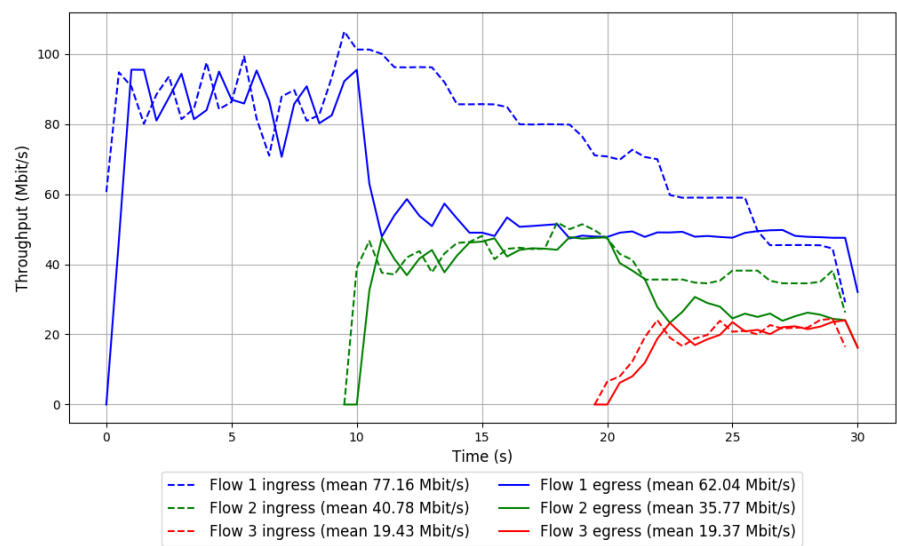Run 5: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 76.98 Mbit/s) ——— Flow 1 egress (mean 55.71 Mbit/s)
- - - Flow 2 ingress (mean 46.78 Mbit/s) ——— Flow 2 egress (mean 38.15 Mbit/s)
- - - Flow 3 ingress (mean 35.60 Mbit/s) ——— Flow 3 egress (mean 35.56 Mbit/s)

• Flow 1 (95th percentile 1709.86 ms)　　• Flow 2 (95th percentile 1322.20 ms)　　• Flow 3 (95th percentile 30.02 ms)
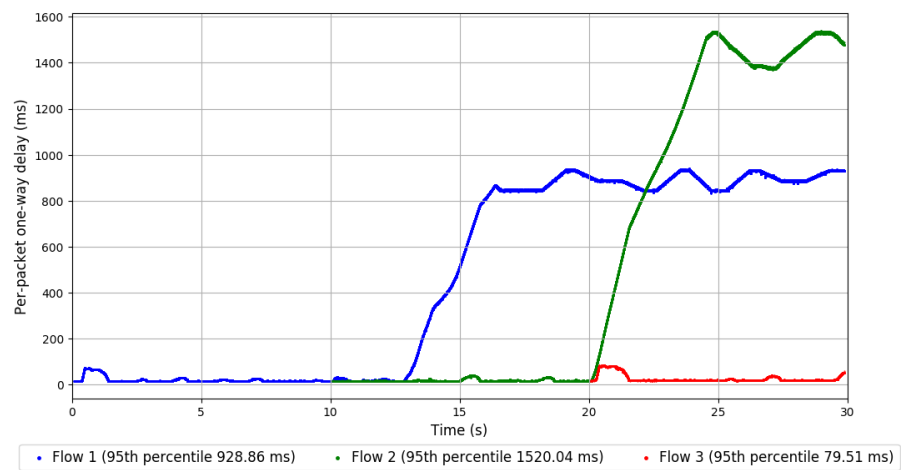
```
Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 11:13:06
End at: 2019-05-30 11:13:36
Local clock offset: -2.151 ms
Remote clock offset: 0.232 ms


# Below is generated by plot.py at 2019-05-30 13:21:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.48 Mbit/s
95th percentile per-packet one-way delay: 930.523 ms
Loss rate: 26.19%
-- Flow 1:
Average throughput: 45.63 Mbit/s
95th percentile per-packet one-way delay: 933.820 ms
Loss rate: 36.85%
-- Flow 2:
Average throughput: 34.70 Mbit/s
95th percentile per-packet one-way delay: 62.360 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 681.581 ms
Loss rate: 10.75%
```

Run 1: Report of PCC-Expr — Data Link
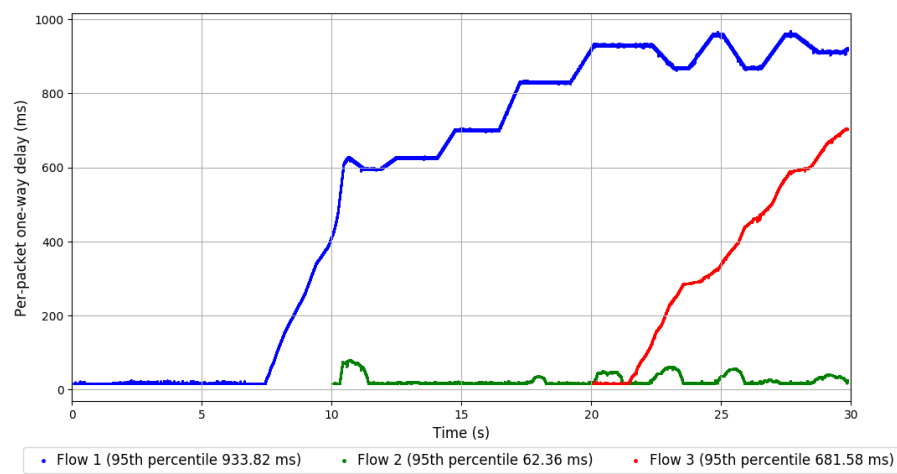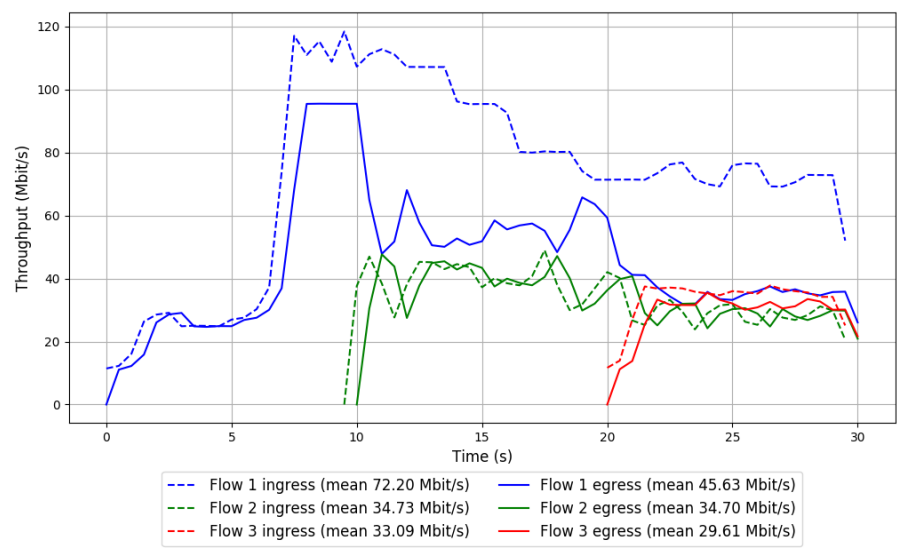
```
Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 11:40:42
End at: 2019-05-30 11:41:12
Local clock offset: 1.914 ms
Remote clock offset: -1.78 ms


# Below is generated by plot.py at 2019-05-30 13:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.67 Mbit/s
95th percentile per-packet one-way delay: 543.278 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 58.23 Mbit/s
95th percentile per-packet one-way delay: 663.119 ms
Loss rate: 2.35%
-- Flow 2:
Average throughput: 29.51 Mbit/s
95th percentile per-packet one-way delay: 74.528 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 51.938 ms
Loss rate: 0.24%
```

Run 2: Report of PCC-Expr — Data Link
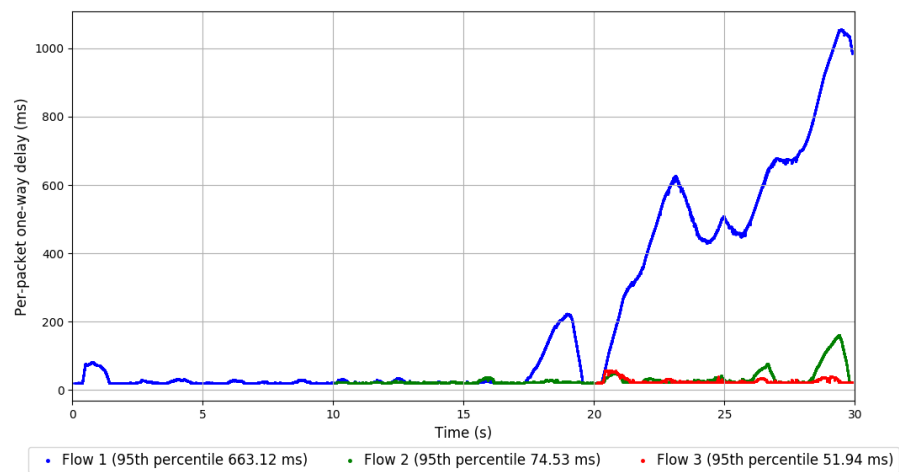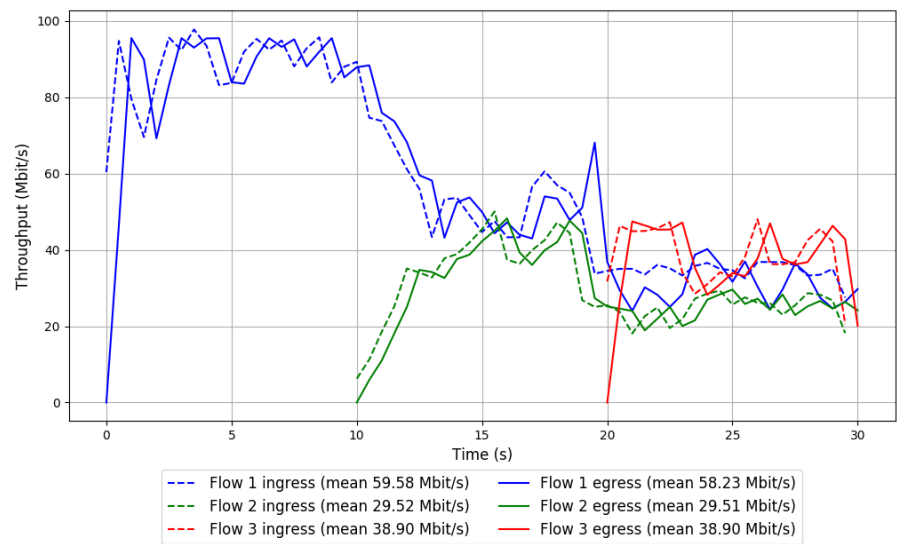
```
Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 12:07:57
End at: 2019-05-30 12:08:27
Local clock offset: 2.9 ms
Remote clock offset: -3.282 ms


# Below is generated by plot.py at 2019-05-30 13:22:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.25 Mbit/s
95th percentile per-packet one-way delay: 1258.917 ms
Loss rate: 16.77%
-- Flow 1:
Average throughput: 62.04 Mbit/s
95th percentile per-packet one-way delay: 1158.123 ms
Loss rate: 19.67%
-- Flow 2:
Average throughput: 35.77 Mbit/s
95th percentile per-packet one-way delay: 1846.096 ms
Loss rate: 12.39%
-- Flow 3:
Average throughput: 19.37 Mbit/s
95th percentile per-packet one-way delay: 40.246 ms
Loss rate: 0.59%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 77.16 Mbit/s) --- Flow 1 egress (mean 62.04 Mbit/s)
Flow 2 ingress (mean 40.78 Mbit/s) --- Flow 2 egress (mean 35.77 Mbit/s)
Flow 3 ingress (mean 19.43 Mbit/s) --- Flow 3 egress (mean 19.37 Mbit/s)

Flow 1 (95th percentile 1158.12 ms)   Flow 2 (95th percentile 1846.10 ms)   Flow 3 (95th percentile 40.25 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 12:34:46
End at: 2019-05-30 12:35:16
Local clock offset: -2.084 ms
Remote clock offset: -6.083 ms


# Below is generated by plot.py at 2019-05-30 13:22:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 1379.920 ms
Loss rate: 17.67%
-- Flow 1:
Average throughput: 64.50 Mbit/s
95th percentile per-packet one-way delay: 928.855 ms
Loss rate: 17.79%
-- Flow 2:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 1520.042 ms
Loss rate: 21.40%
-- Flow 3:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 79.511 ms
Loss rate: 0.88%
```

Run 4: Report of PCC-Expr — Data Link
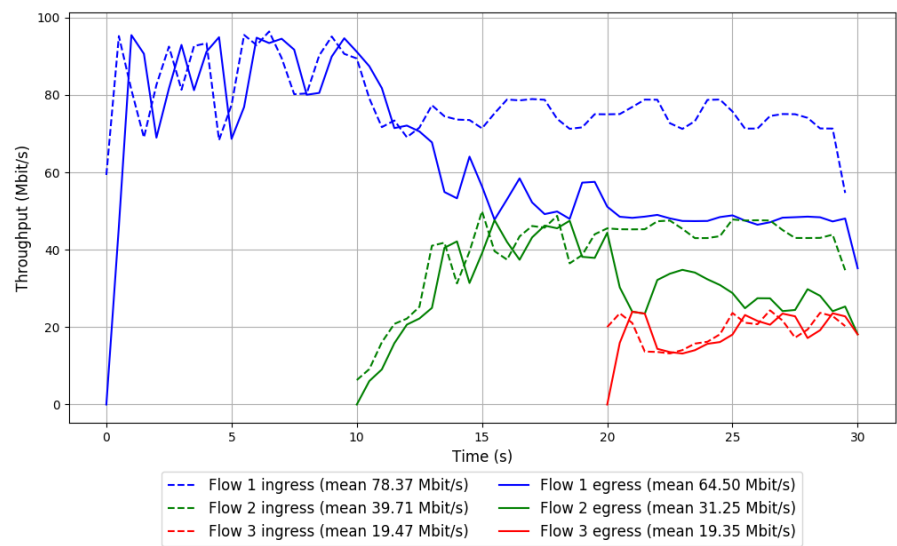
```
Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 13:02:25
End at: 2019-05-30 13:02:55
Local clock offset: 2.395 ms
Remote clock offset: -6.02 ms


# Below is generated by plot.py at 2019-05-30 13:22:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 941.810 ms
Loss rate: 20.47%
-- Flow 1:
Average throughput: 54.05 Mbit/s
95th percentile per-packet one-way delay: 947.992 ms
Loss rate: 29.12%
-- Flow 2:
Average throughput: 38.10 Mbit/s
95th percentile per-packet one-way delay: 128.975 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 76.645 ms
Loss rate: 1.26%
```

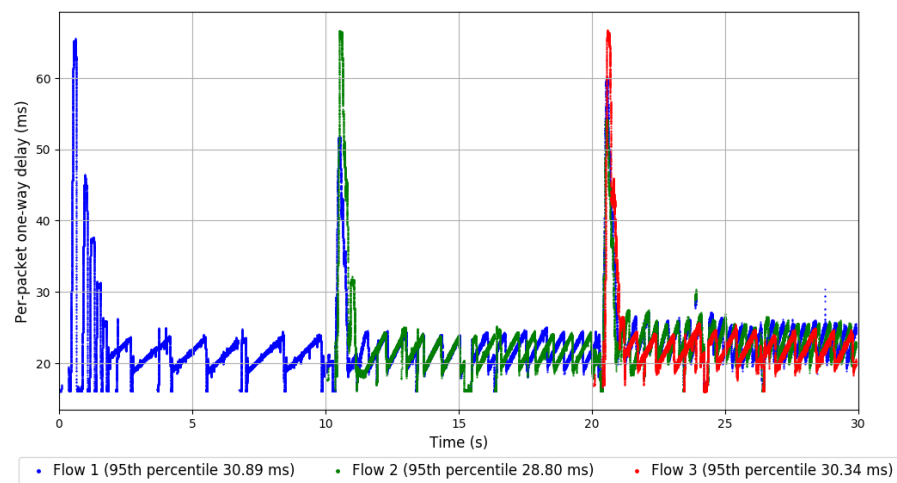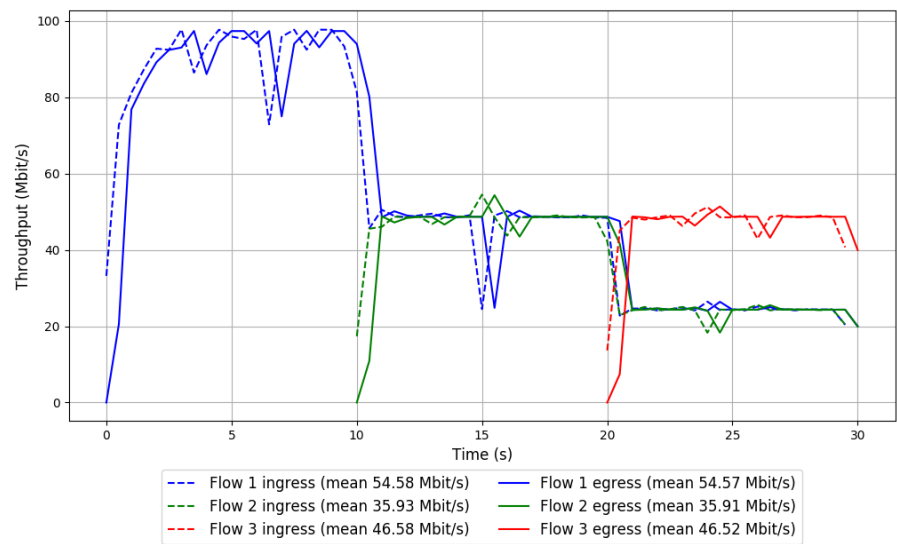# Run 5: Report of PCC-Expr — Data Link
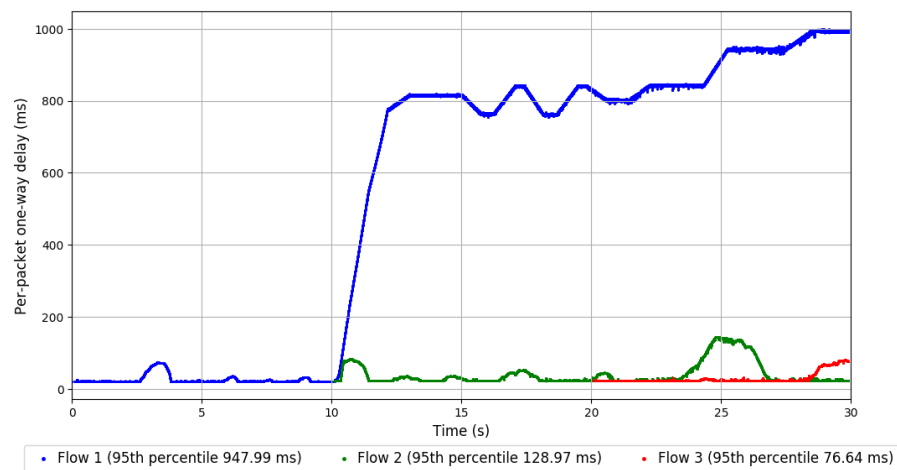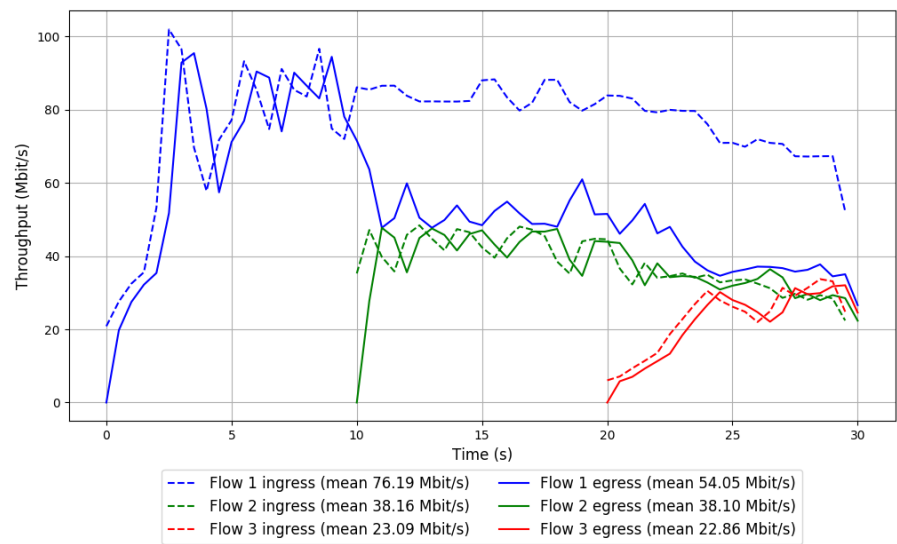
```
Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 11:07:56
End at: 2019-05-30 11:08:26
Local clock offset: -1.747 ms
Remote clock offset: -0.397 ms


# Below is generated by plot.py at 2019-05-30 13:22:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.81 Mbit/s
95th percentile per-packet one-way delay: 26.887 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 62.22 Mbit/s
95th percentile per-packet one-way delay: 25.729 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 35.84 Mbit/s
95th percentile per-packet one-way delay: 27.570 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 45.685 ms
Loss rate: 0.56%
```
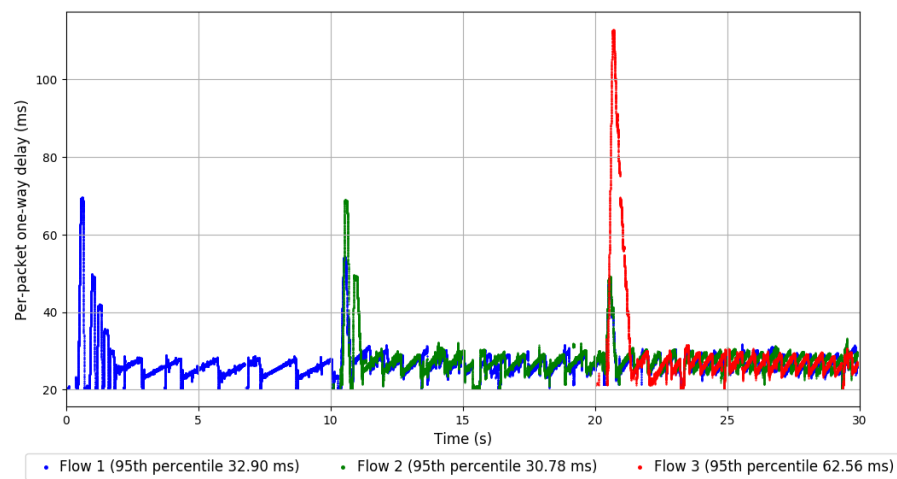
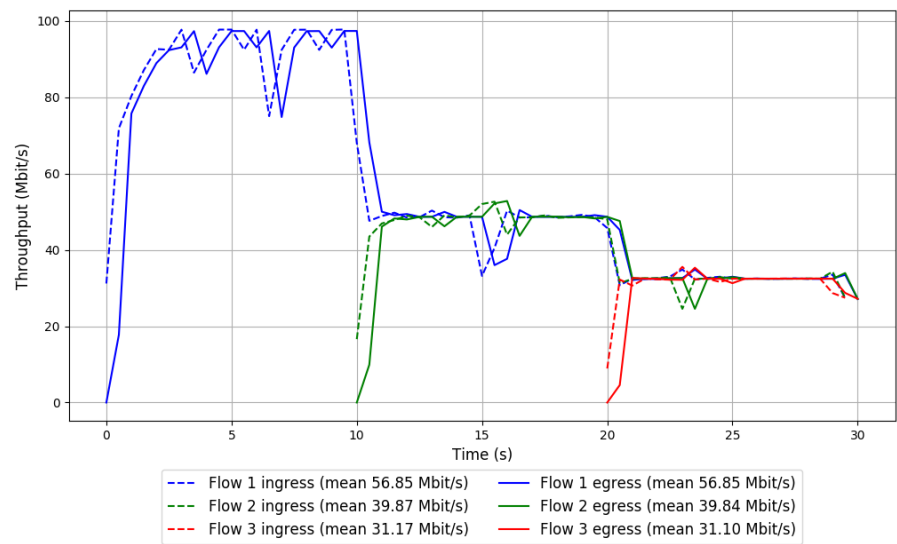Run 1: Report of QUIC Cubic — Data Link
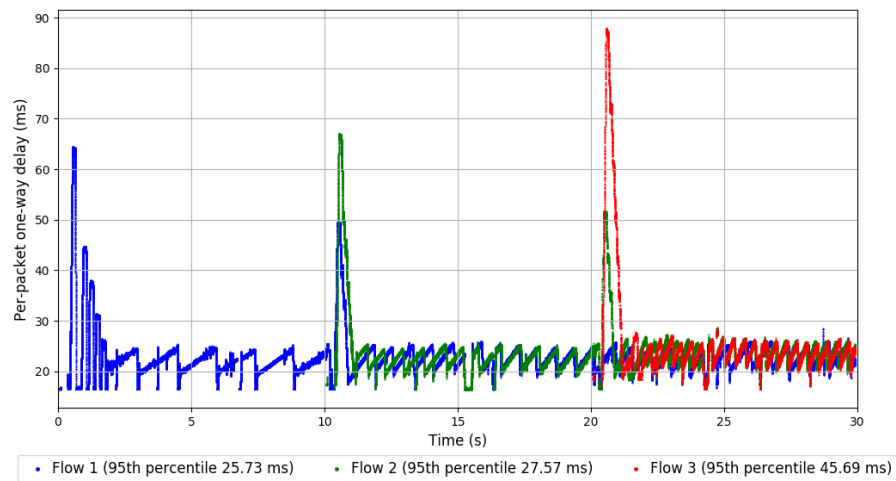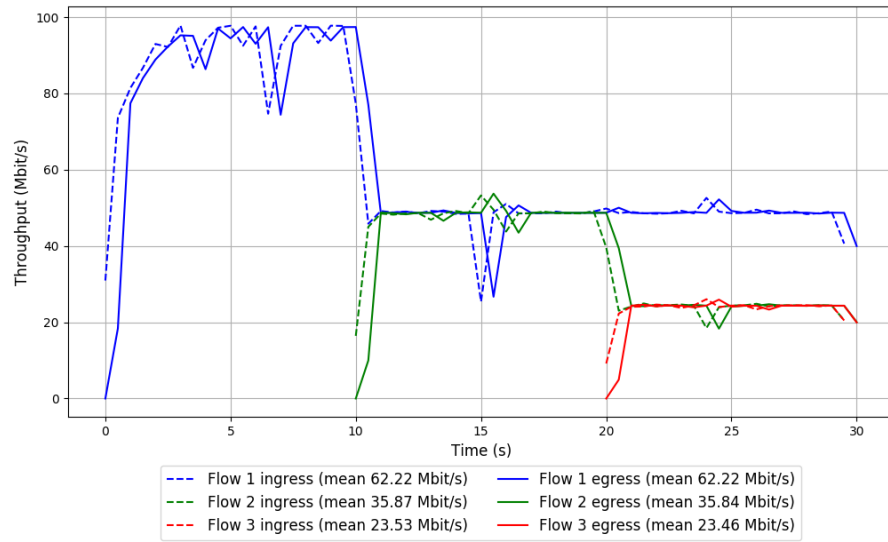
```
Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 11:35:29
End at: 2019-05-30 11:35:59
Local clock offset: -3.285 ms
Remote clock offset: -1.088 ms


# Below is generated by plot.py at 2019-05-30 13:22:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.61 Mbit/s
95th percentile per-packet one-way delay: 27.003 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 54.43 Mbit/s
95th percentile per-packet one-way delay: 28.894 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 47.28 Mbit/s
95th percentile per-packet one-way delay: 24.242 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 48.365 ms
Loss rate: 0.50%
```

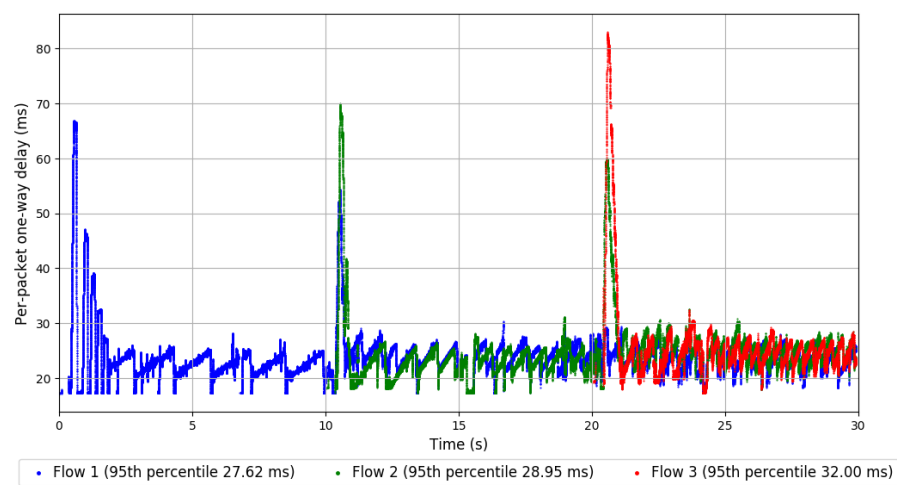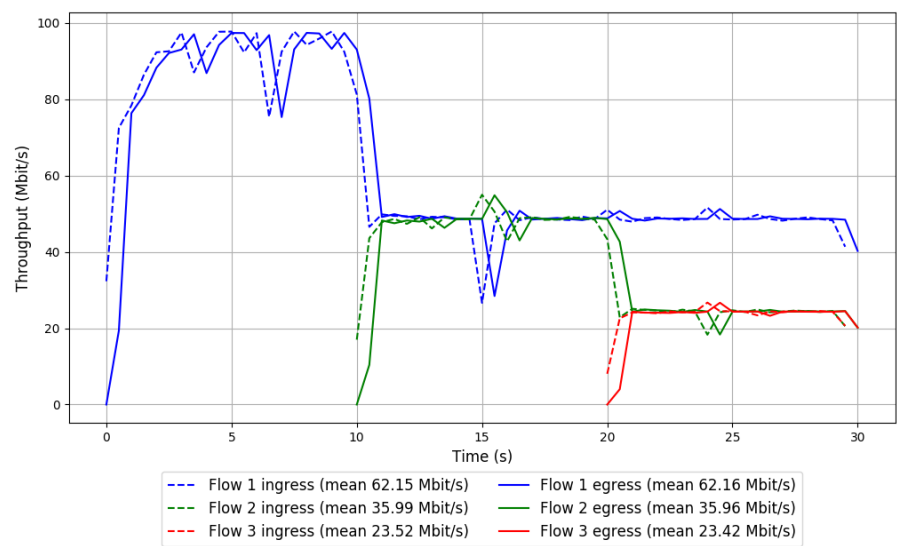Run 2: Report of QUIC Cubic — Data Link
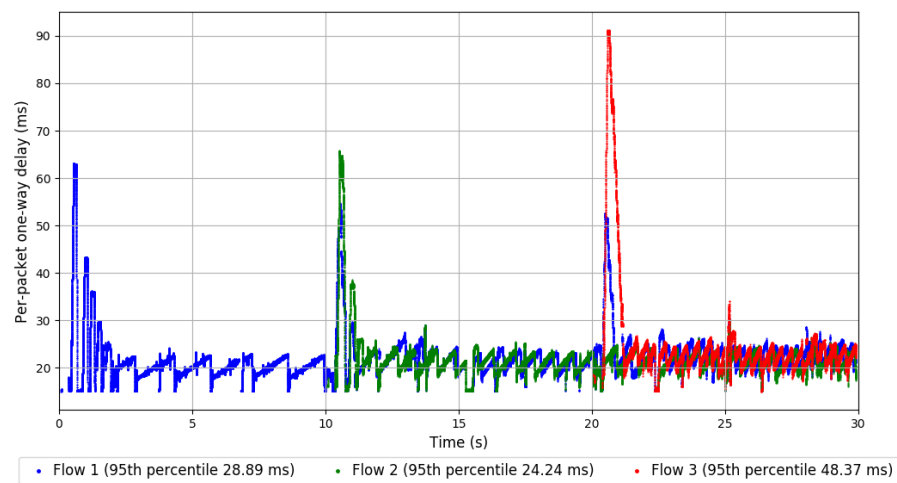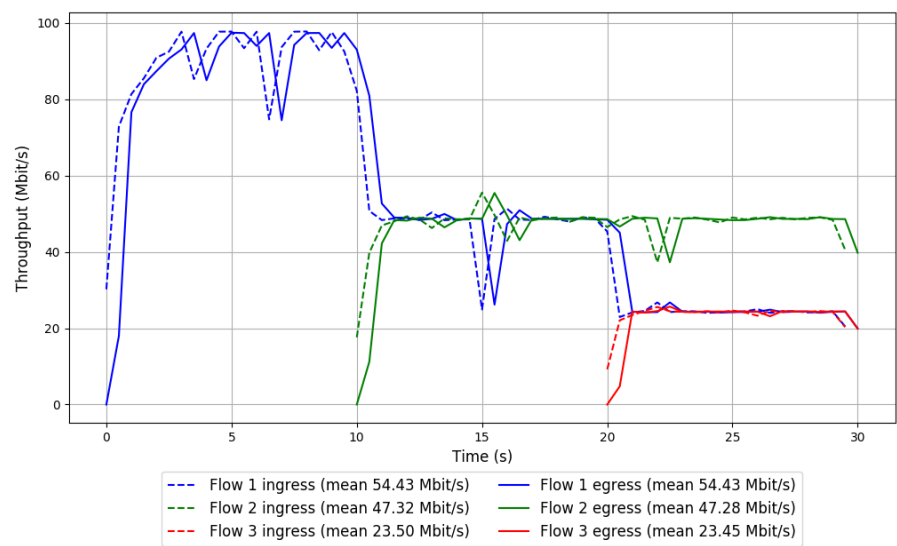
```
Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 12:02:53
End at: 2019-05-30 12:03:23
Local clock offset: -0.863 ms
Remote clock offset: -3.446 ms


# Below is generated by plot.py at 2019-05-30 13:22:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.82 Mbit/s
95th percentile per-packet one-way delay: 30.811 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 54.57 Mbit/s
95th percentile per-packet one-way delay: 30.892 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 35.91 Mbit/s
95th percentile per-packet one-way delay: 28.798 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 46.52 Mbit/s
95th percentile per-packet one-way delay: 30.345 ms
Loss rate: 0.37%
```

Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 54.58 Mbit/s) --- Flow 1 egress (mean 54.57 Mbit/s)
Flow 2 ingress (mean 35.93 Mbit/s) --- Flow 2 egress (mean 35.91 Mbit/s)
Flow 3 ingress (mean 46.58 Mbit/s) --- Flow 3 egress (mean 46.52 Mbit/s)

Flow 1 (95th percentile 30.89 ms)   Flow 2 (95th percentile 28.80 ms)   Flow 3 (95th percentile 30.34 ms)

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```
Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 12:29:23
End at: 2019-05-30 12:29:53
Local clock offset: 3.191 ms
Remote clock offset: -4.976 ms


# Below is generated by plot.py at 2019-05-30 13:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.61 Mbit/s
95th percentile per-packet one-way delay: 33.740 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 32.903 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 30.777 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 31.10 Mbit/s
95th percentile per-packet one-way delay: 62.556 ms
Loss rate: 0.47%
```

Run 4: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 56.85 Mbit/s) —— Flow 1 egress (mean 56.85 Mbit/s)
- - - Flow 2 ingress (mean 39.87 Mbit/s) —— Flow 2 egress (mean 39.84 Mbit/s)
- - - Flow 3 ingress (mean 31.17 Mbit/s) —— Flow 3 egress (mean 31.10 Mbit/s)

• Flow 1 (95th percentile 32.90 ms)   • Flow 2 (95th percentile 30.78 ms)   • Flow 3 (95th percentile 62.56 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 12:57:03
End at: 2019-05-30 12:57:33
Local clock offset: -2.869 ms
Remote clock offset: -7.674 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.80 Mbit/s
95th percentile per-packet one-way delay: 28.587 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 62.16 Mbit/s
95th percentile per-packet one-way delay: 27.624 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 35.96 Mbit/s
95th percentile per-packet one-way delay: 28.946 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 32.002 ms
Loss rate: 0.71%
```

Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 62.15 Mbit/s)   Flow 1 egress (mean 62.16 Mbit/s)
Flow 2 ingress (mean 35.99 Mbit/s)   Flow 2 egress (mean 35.96 Mbit/s)
Flow 3 ingress (mean 23.52 Mbit/s)   Flow 3 egress (mean 23.42 Mbit/s)

Flow 1 (95th percentile 27.62 ms)   Flow 2 (95th percentile 28.95 ms)   Flow 3 (95th percentile 32.00 ms)

```
Run 1: Statistics of SCReAM

Start at: 2019-05-30 11:00:35
End at: 2019-05-30 11:01:05
Local clock offset: -2.59 ms
Remote clock offset: -0.985 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 17.289 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 17.340 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 15.082 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 15.132 ms
Loss rate: 0.36%
```
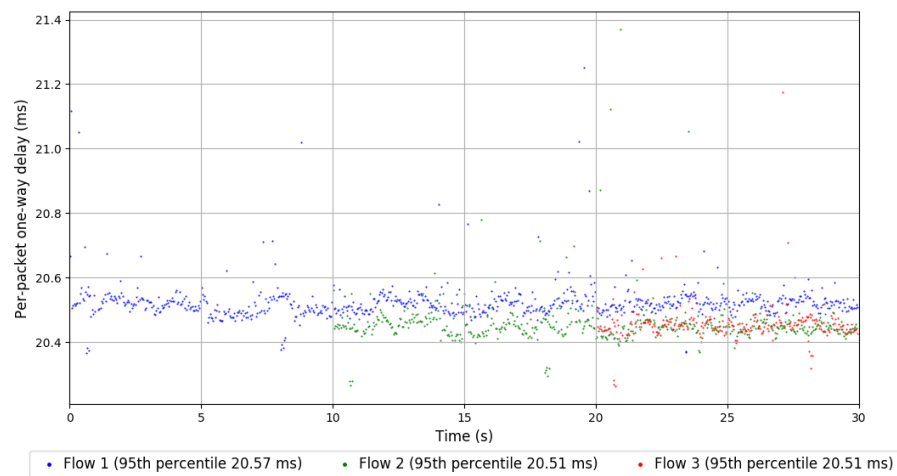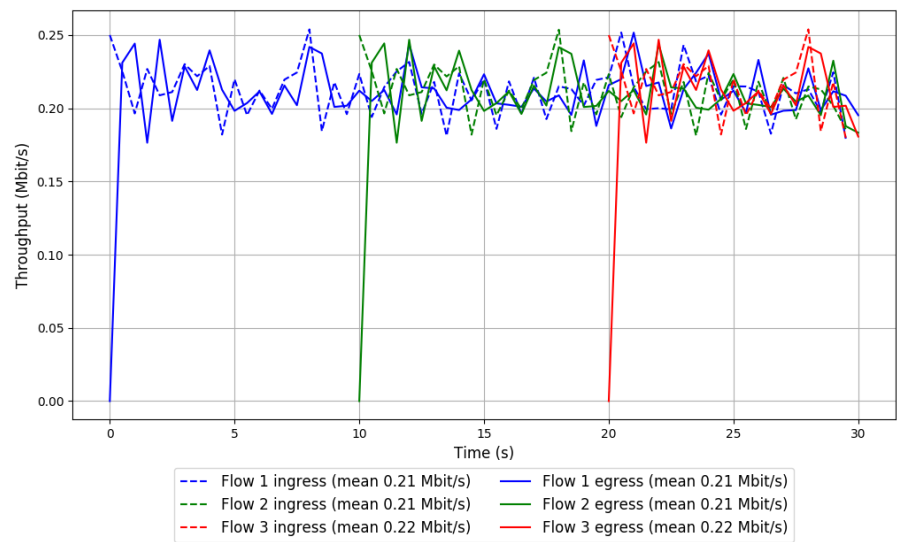
Run 1: Report of SCReAM — Data Link
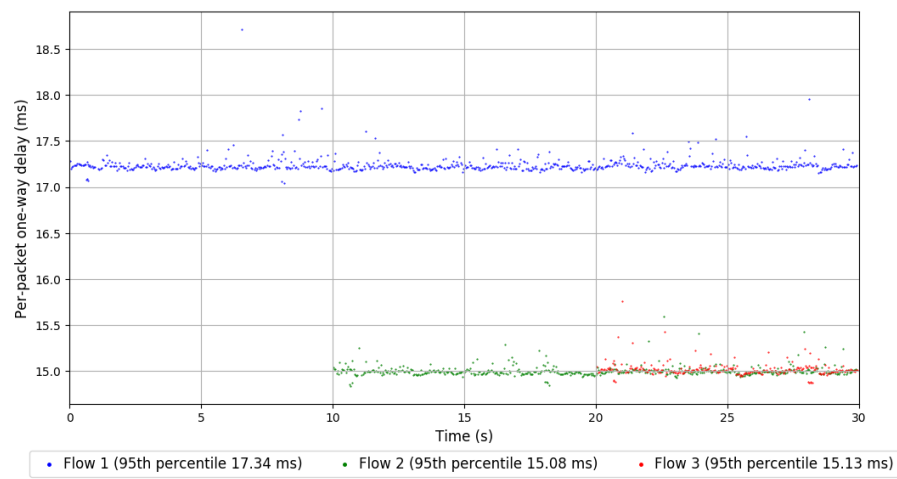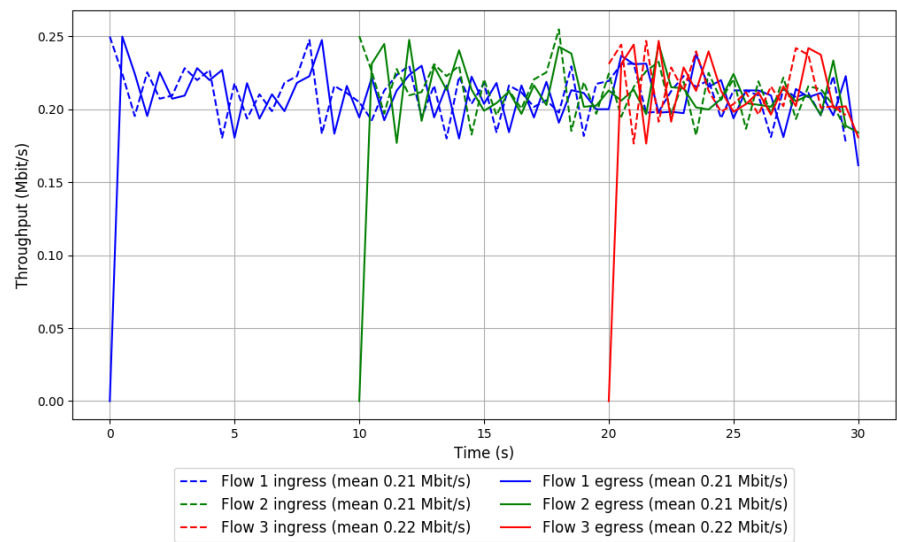
```
Run 2: Statistics of SCReAM

Start at: 2019-05-30 11:27:53
End at: 2019-05-30 11:28:23
Local clock offset: -2.722 ms
Remote clock offset: -1.275 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 16.342 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.370 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 16.299 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 16.316 ms
Loss rate: 0.35%
```

# Run 2: Report of SCReAM — Data Link
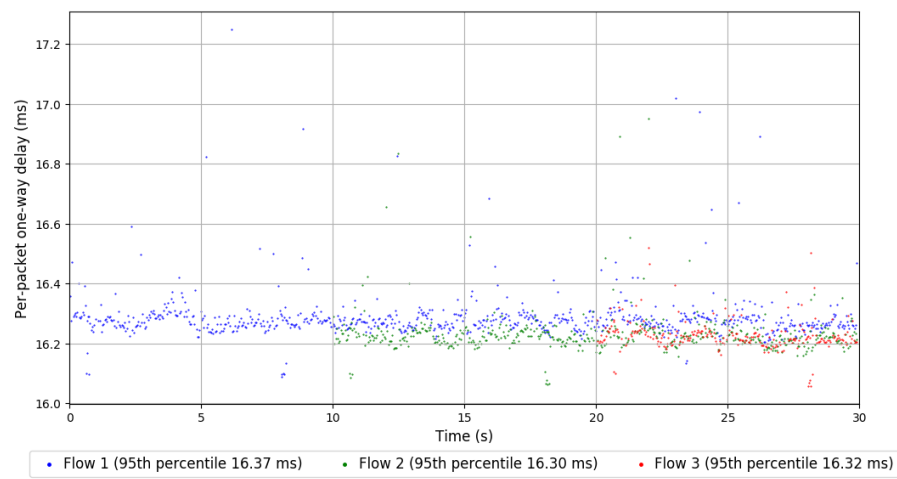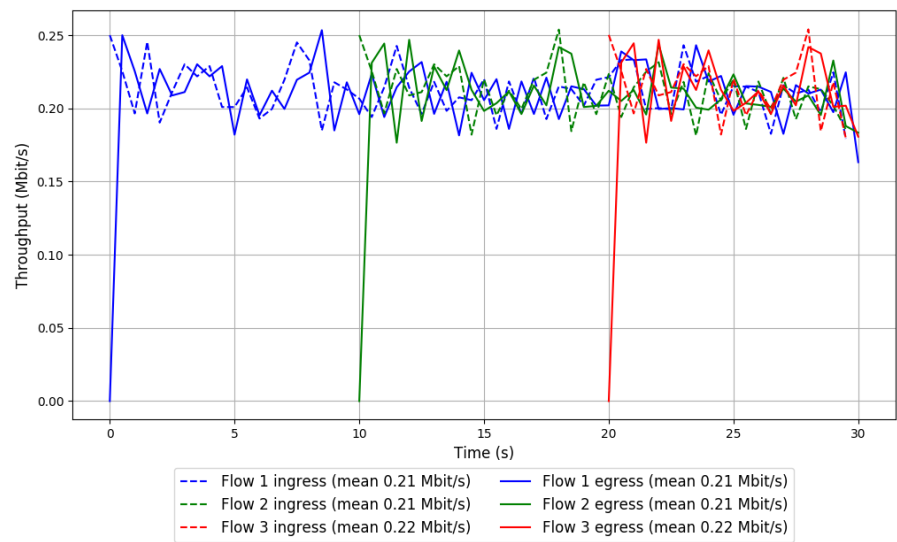
```
Run 3: Statistics of SCReAM

Start at: 2019-05-30 11:55:33
End at: 2019-05-30 11:56:03
Local clock offset: 3.097 ms
Remote clock offset: -1.94 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 19.337 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.367 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 19.301 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 19.263 ms
Loss rate: 0.36%
```

Run 3: Report of SCReAM — Data Link
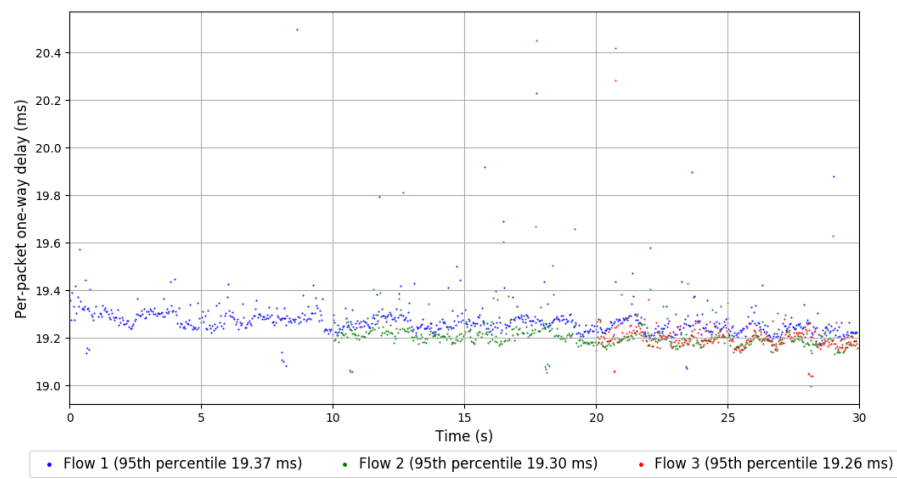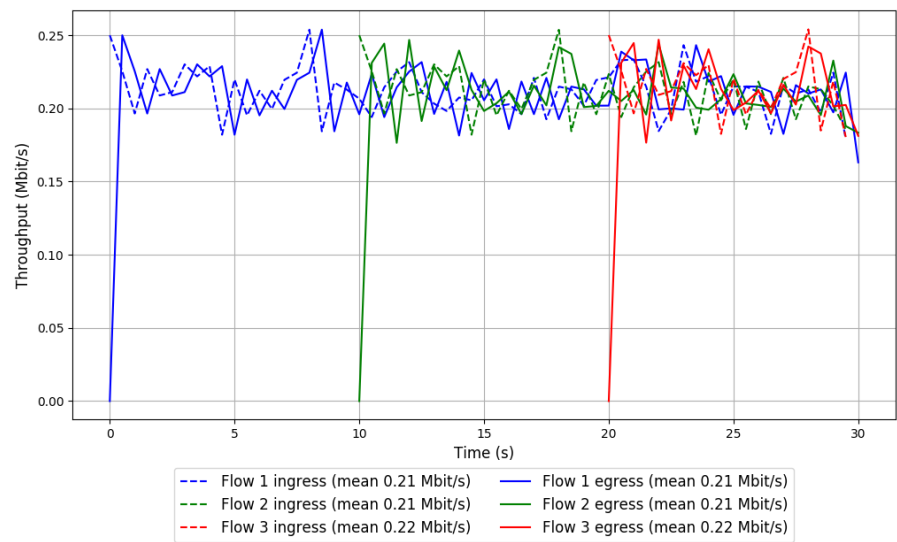
```
Run 4: Statistics of SCReAM

Start at: 2019-05-30 12:22:07
End at: 2019-05-30 12:22:37
Local clock offset: 3.19 ms
Remote clock offset: -4.574 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 20.559 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.572 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 20.514 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 20.512 ms
Loss rate: 0.35%
```
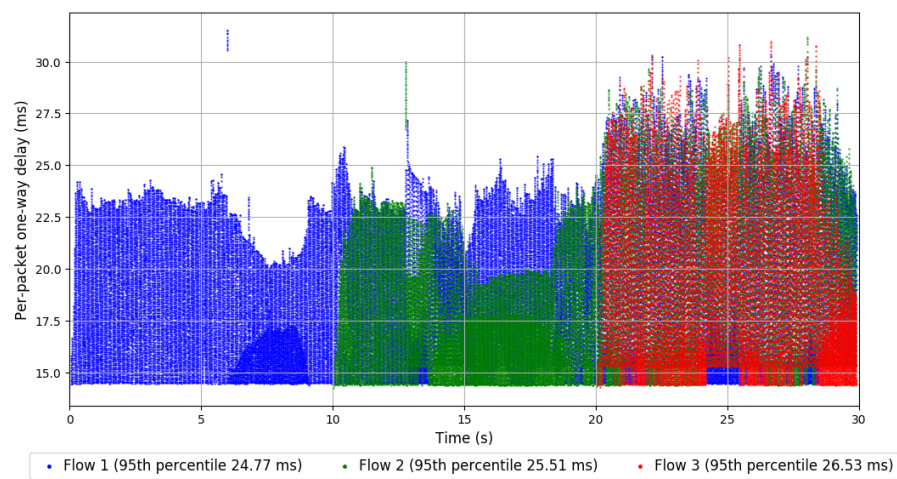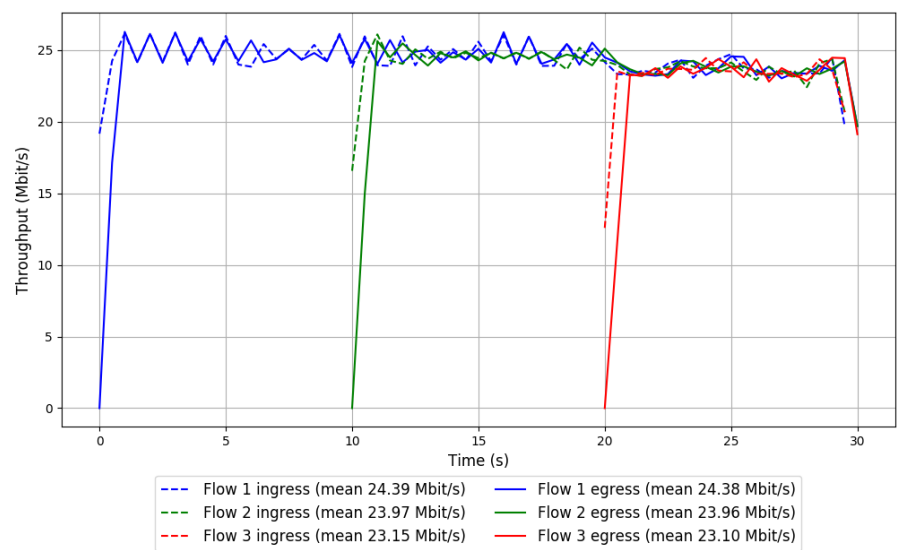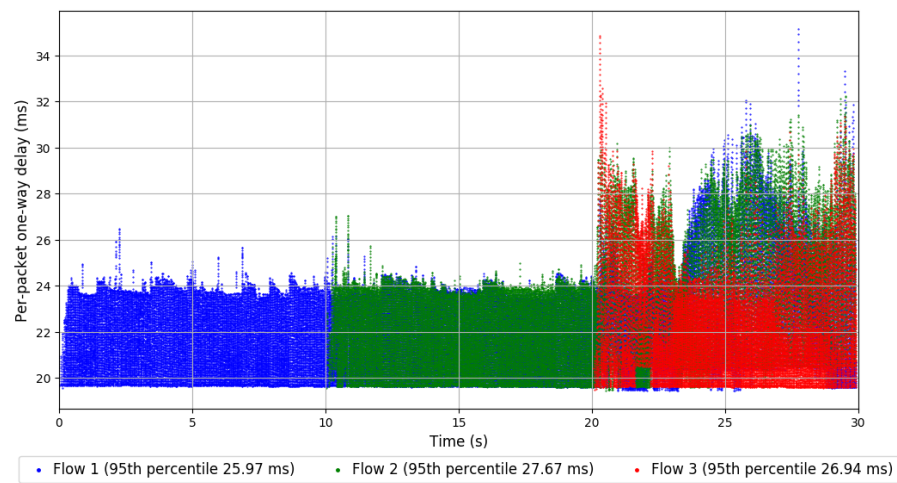
Run 4: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.21 Mbit/s) — — — Flow 1 egress (mean 0.21 Mbit/s) ———
Flow 2 ingress (mean 0.21 Mbit/s) — — — Flow 2 egress (mean 0.21 Mbit/s) ———
Flow 3 ingress (mean 0.22 Mbit/s) — — — Flow 3 egress (mean 0.22 Mbit/s) ———

• Flow 1 (95th percentile 20.57 ms)   • Flow 2 (95th percentile 20.51 ms)   • Flow 3 (95th percentile 20.51 ms)

```
Run 5: Statistics of SCReAM

Start at: 2019-05-30 12:49:38
End at: 2019-05-30 12:50:08
Local clock offset: 2.677 ms
Remote clock offset: -7.633 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 22.824 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 22.814 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 22.823 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 22.835 ms
Loss rate: 0.35%
```
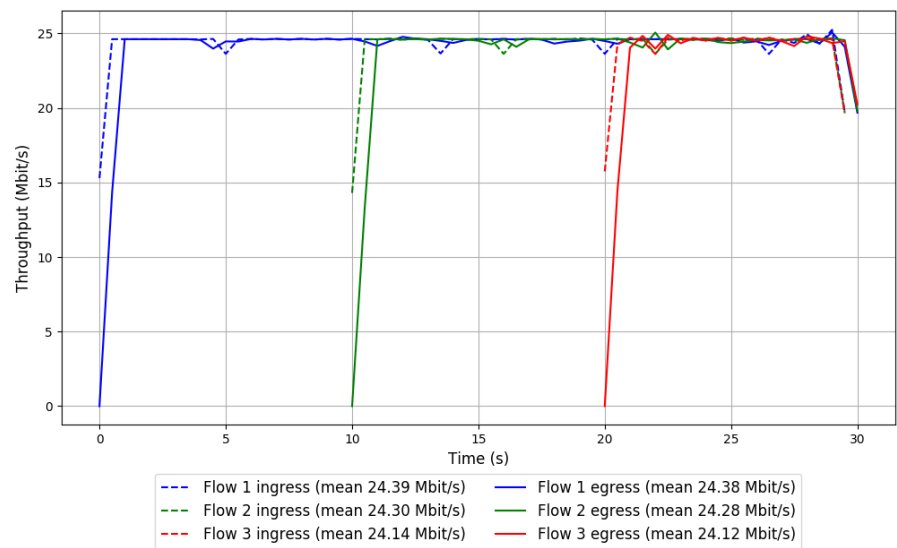
Run 5: Report of SCReAM — Data Link
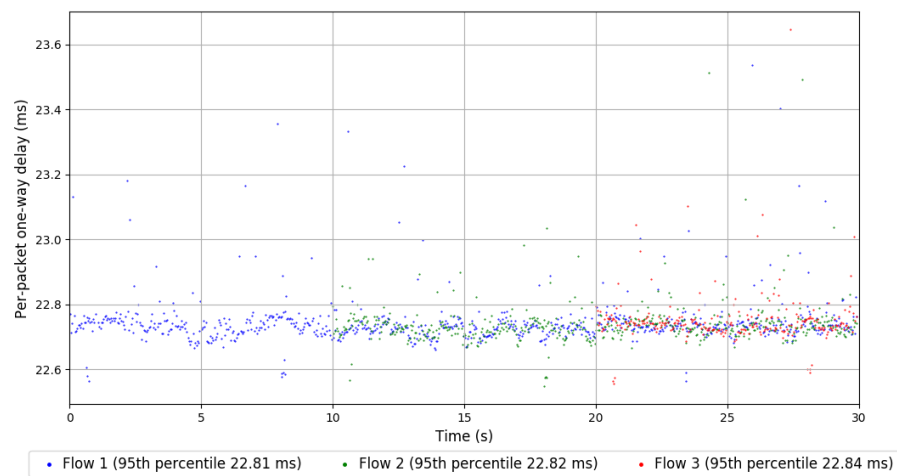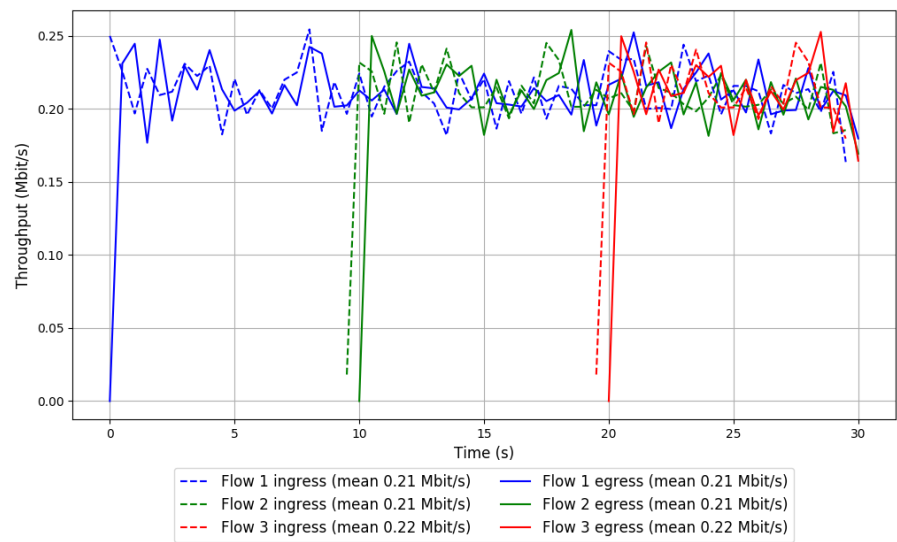
```
Run 1: Statistics of Sprout

Start at: 2019-05-30 11:17:27
End at: 2019-05-30 11:17:57
Local clock offset: -2.351 ms
Remote clock offset: 1.332 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.93 Mbit/s
95th percentile per-packet one-way delay: 25.459 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 24.766 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 23.96 Mbit/s
95th percentile per-packet one-way delay: 25.511 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 23.10 Mbit/s
95th percentile per-packet one-way delay: 26.530 ms
Loss rate: 0.41%
```

Run 1: Report of Sprout — Data Link

- - - Flow 1 ingress (mean 24.39 Mbit/s) ——— Flow 1 egress (mean 24.38 Mbit/s)
- - - Flow 2 ingress (mean 23.97 Mbit/s) ——— Flow 2 egress (mean 23.96 Mbit/s)
- - - Flow 3 ingress (mean 23.15 Mbit/s) ——— Flow 3 egress (mean 23.10 Mbit/s)

• Flow 1 (95th percentile 24.77 ms)   • Flow 2 (95th percentile 25.51 ms)   • Flow 3 (95th percentile 26.53 ms)

```
Run 2: Statistics of Sprout

Start at: 2019-05-30 11:44:45
End at: 2019-05-30 11:45:15
Local clock offset: 2.035 ms
Remote clock offset: -2.082 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.48 Mbit/s
95th percentile per-packet one-way delay: 26.950 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 25.967 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 24.28 Mbit/s
95th percentile per-packet one-way delay: 27.672 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 24.12 Mbit/s
95th percentile per-packet one-way delay: 26.944 ms
Loss rate: 0.22%
```

Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 24.39 Mbit/s)   Flow 1 egress (mean 24.38 Mbit/s)
Flow 2 ingress (mean 24.30 Mbit/s)   Flow 2 egress (mean 24.28 Mbit/s)
Flow 3 ingress (mean 24.14 Mbit/s)   Flow 3 egress (mean 24.12 Mbit/s)

Flow 1 (95th percentile 25.97 ms)   Flow 2 (95th percentile 27.67 ms)   Flow 3 (95th percentile 26.94 ms)

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```
Run 3: Statistics of Sprout

Start at: 2019-05-30 12:11:54
End at: 2019-05-30 12:12:24
Local clock offset: 3.484 ms
Remote clock offset: -3.733 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.47 Mbit/s
95th percentile per-packet one-way delay: 27.327 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.37 Mbit/s
95th percentile per-packet one-way delay: 27.160 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 27.031 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 24.07 Mbit/s
95th percentile per-packet one-way delay: 27.880 ms
Loss rate: 0.41%
```

Run 3: Report of Sprout — Data Link
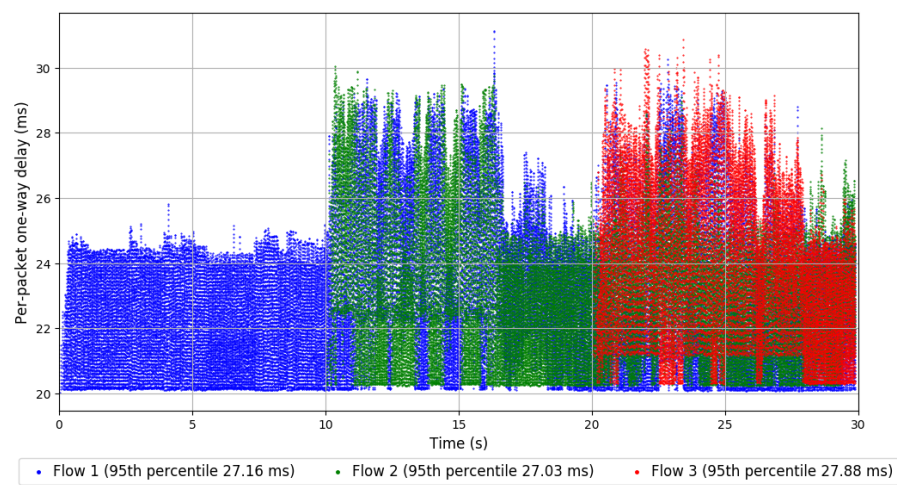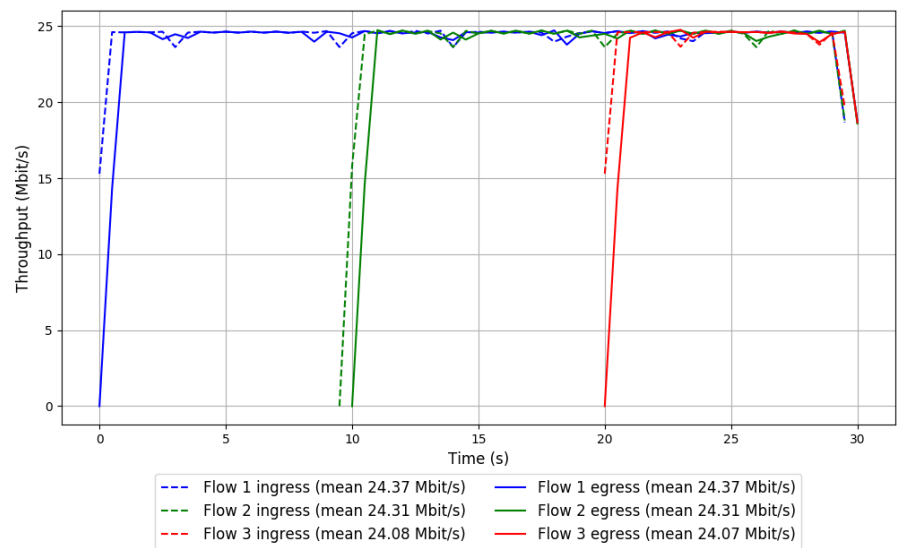
```
Run 4: Statistics of Sprout

Start at: 2019-05-30 12:39:03
End at: 2019-05-30 12:39:34
Local clock offset: -2.6 ms
Remote clock offset: -6.252 ms


# Below is generated by plot.py at 2019-05-30 13:22:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.56 Mbit/s
95th percentile per-packet one-way delay: 23.313 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.53 Mbit/s
95th percentile per-packet one-way delay: 23.722 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 24.23 Mbit/s
95th percentile per-packet one-way delay: 22.190 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 23.142 ms
Loss rate: 0.21%
```

Run 4: Report of Sprout — Data Link
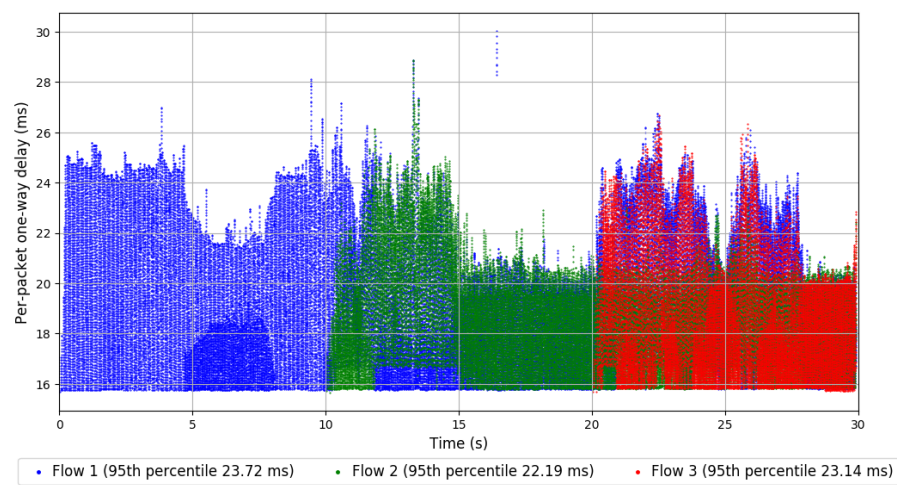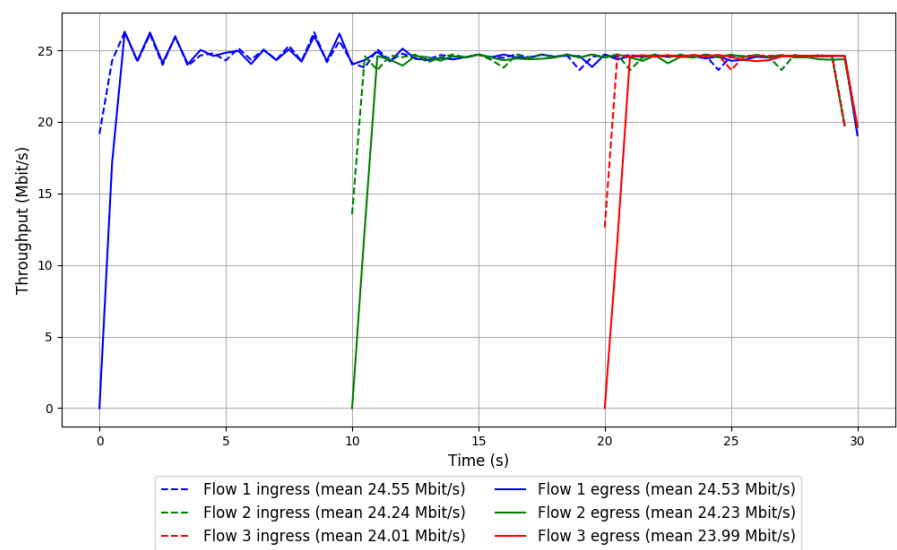
```
Run 5: Statistics of Sprout

Start at: 2019-05-30 13:06:37
End at: 2019-05-30 13:07:07
Local clock offset: 0.6 ms
Remote clock offset: -6.365 ms


# Below is generated by plot.py at 2019-05-30 13:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.27 Mbit/s
95th percentile per-packet one-way delay: 31.369 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 30.505 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 31.593 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 32.306 ms
Loss rate: 0.25%
```
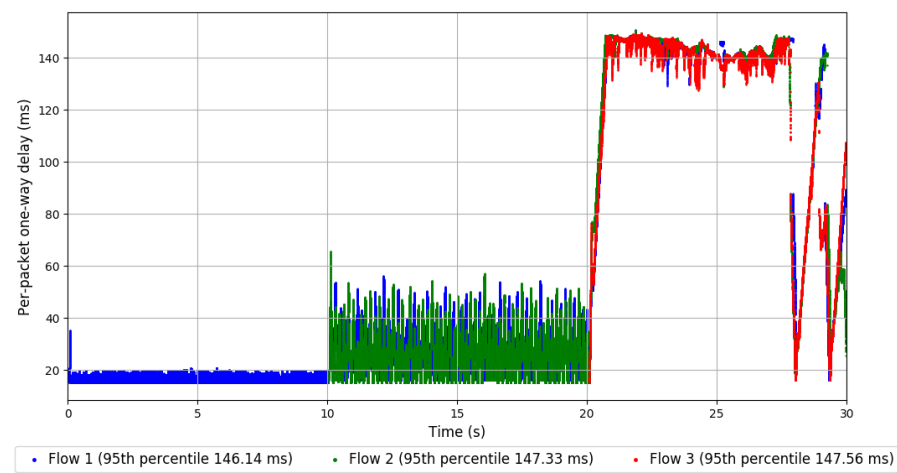
Run 5: Report of Sprout — Data Link
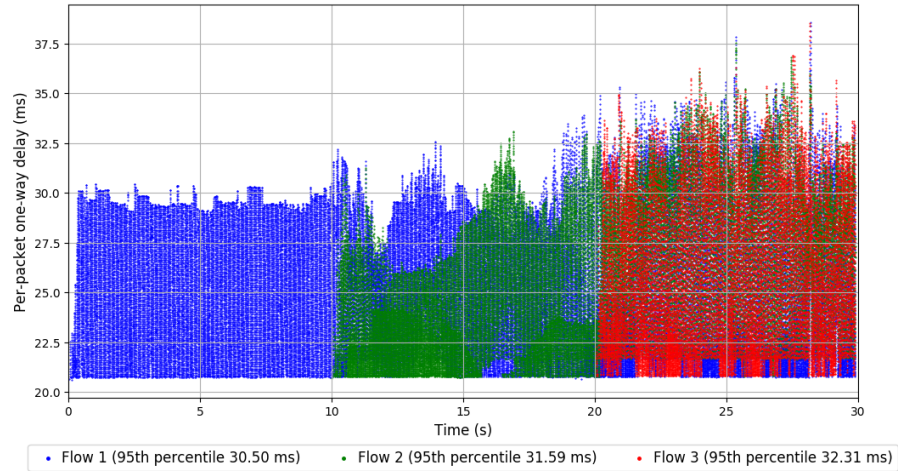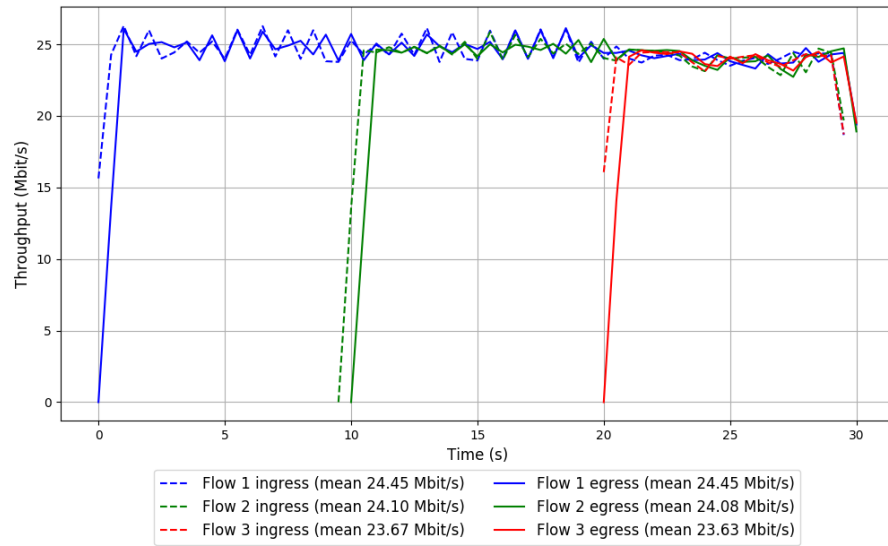
```
Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 10:56:31
End at: 2019-05-30 10:57:01
Local clock offset: -1.58 ms
Remote clock offset: 1.028 ms

# Below is generated by plot.py at 2019-05-30 13:24:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.90 Mbit/s
95th percentile per-packet one-way delay: 108.449 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 54.88 Mbit/s
95th percentile per-packet one-way delay: 101.066 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 46.27 Mbit/s
95th percentile per-packet one-way delay: 43.796 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 24.75 Mbit/s
95th percentile per-packet one-way delay: 194.826 ms
Loss rate: 2.44%
```
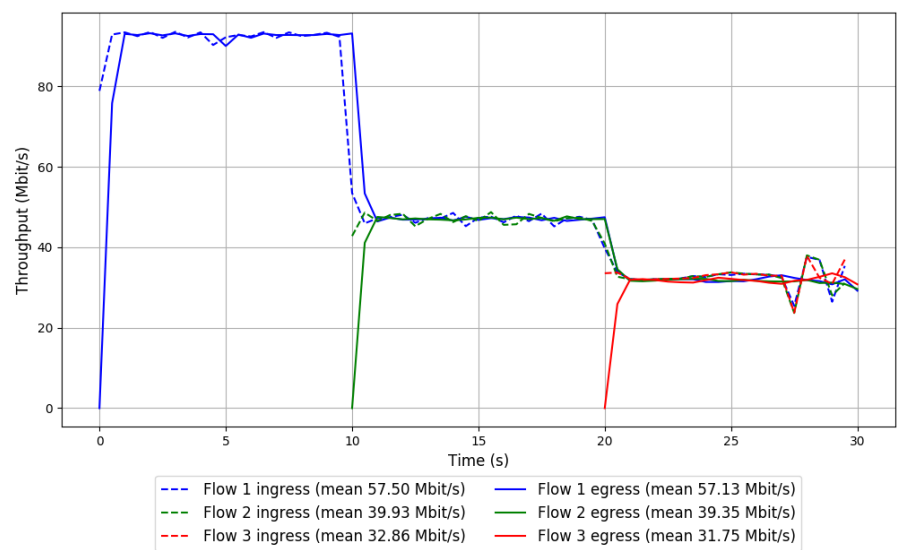
Run 1: Report of TaoVA-100x — Data Link
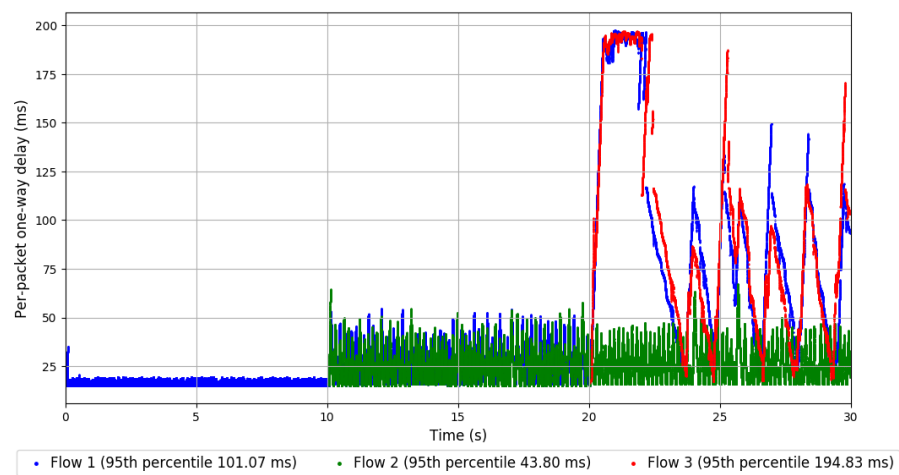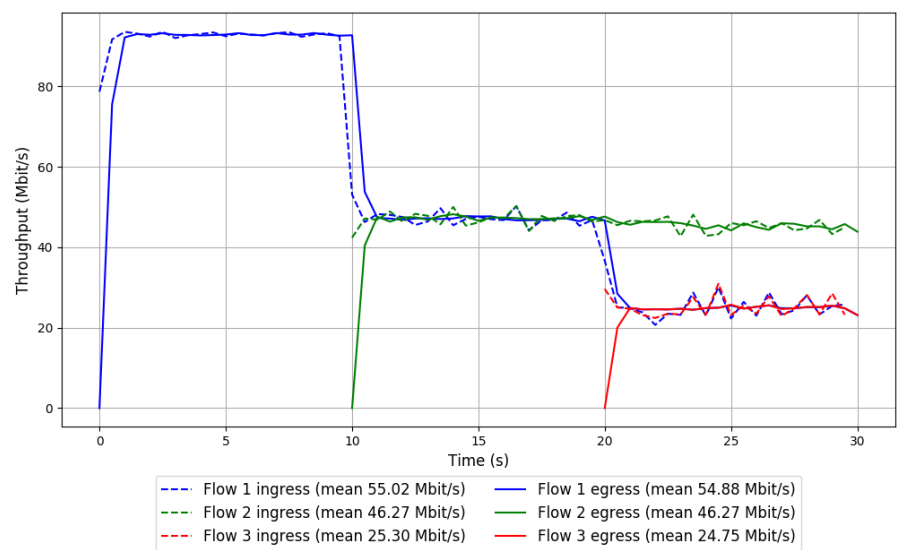
```
Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 11:23:49
End at: 2019-05-30 11:24:19
Local clock offset: 2.122 ms
Remote clock offset: -1.185 ms


# Below is generated by plot.py at 2019-05-30 13:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 152.744 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 47.017 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 36.05 Mbit/s
95th percentile per-packet one-way delay: 191.998 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 24.77 Mbit/s
95th percentile per-packet one-way delay: 200.959 ms
Loss rate: 1.43%
```
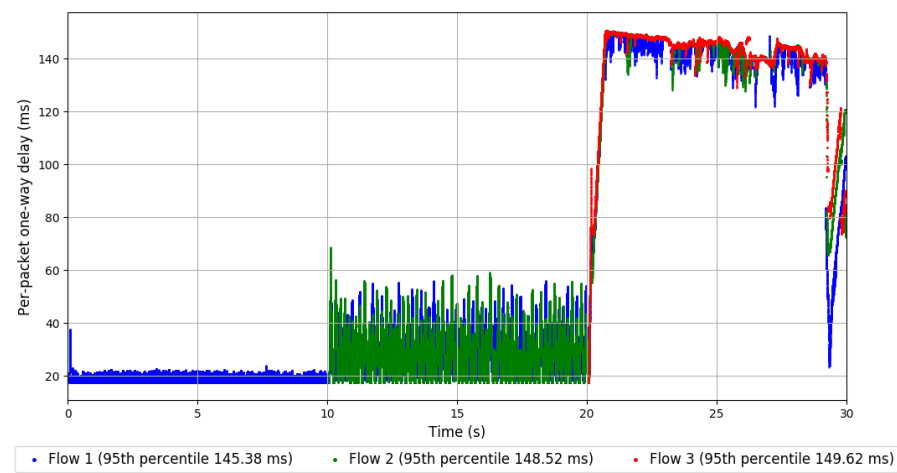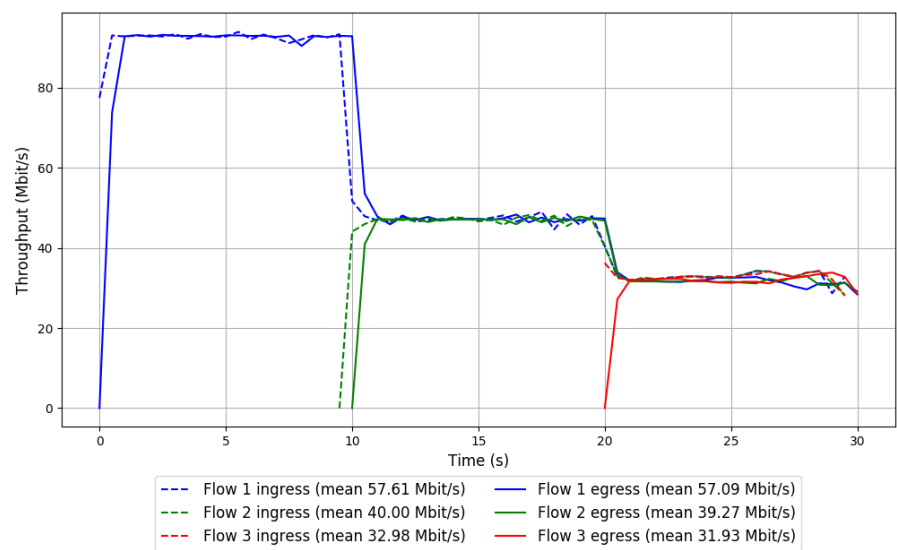
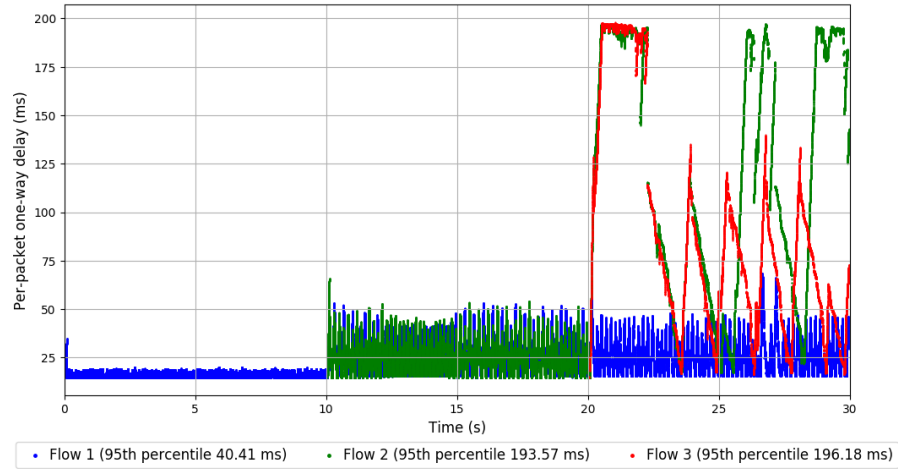Run 2: Report of TaoVA-100x — Data Link
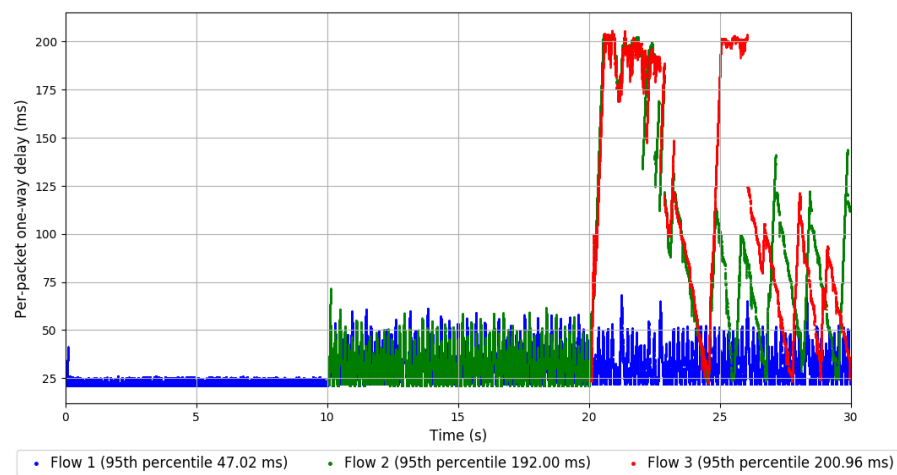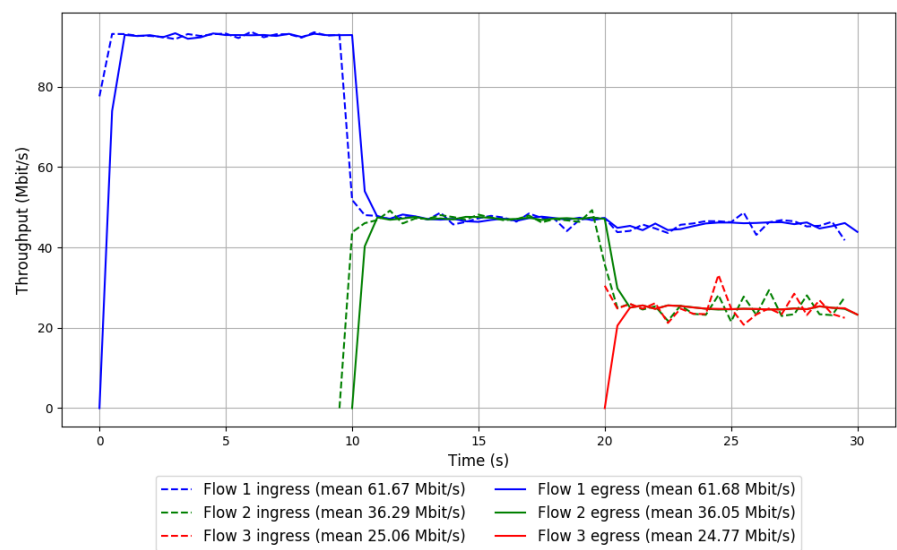
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 11:51:02
End at: 2019-05-30 11:51:32
Local clock offset: -1.935 ms
Remote clock offset: -2.498 ms


# Below is generated by plot.py at 2019-05-30 13:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.87 Mbit/s
95th percentile per-packet one-way delay: 147.090 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 57.13 Mbit/s
95th percentile per-packet one-way delay: 146.137 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 39.35 Mbit/s
95th percentile per-packet one-way delay: 147.327 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 147.555 ms
Loss rate: 3.63%
```
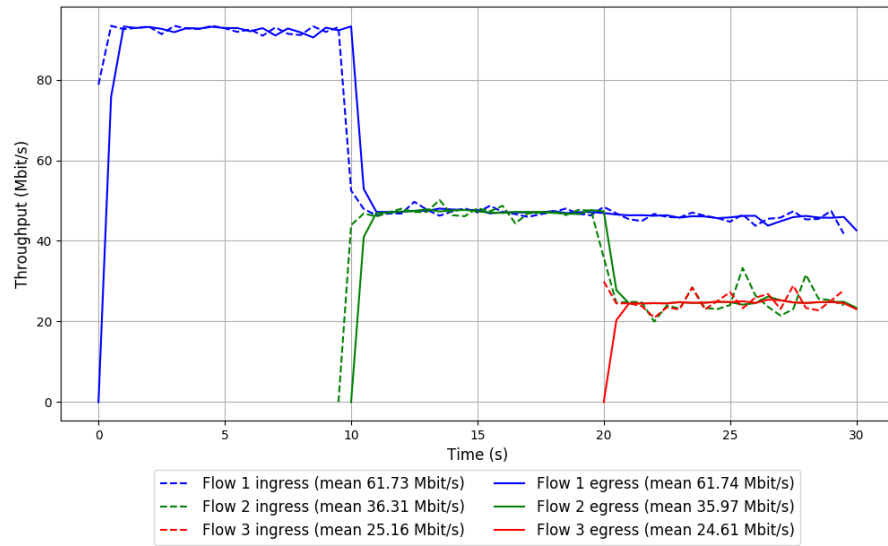
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 57.50 Mbit/s)   Flow 1 egress (mean 57.13 Mbit/s)
Flow 2 ingress (mean 39.93 Mbit/s)   Flow 2 egress (mean 39.35 Mbit/s)
Flow 3 ingress (mean 32.86 Mbit/s)   Flow 3 egress (mean 31.75 Mbit/s)

Flow 1 (95th percentile 146.14 ms)   Flow 2 (95th percentile 147.33 ms)   Flow 3 (95th percentile 147.56 ms)

```
Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 12:18:02
End at: 2019-05-30 12:18:32
Local clock offset: -1.459 ms
Remote clock offset: -6.102 ms

# Below is generated by plot.py at 2019-05-30 13:24:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.85 Mbit/s
95th percentile per-packet one-way delay: 147.985 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 145.375 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 148.521 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 31.93 Mbit/s
95th percentile per-packet one-way delay: 149.615 ms
Loss rate: 3.43%
```

Run 4: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 57.61 Mbit/s)
——— Flow 1 egress (mean 57.09 Mbit/s)
- - - - Flow 2 ingress (mean 40.00 Mbit/s)
——— Flow 2 egress (mean 39.27 Mbit/s)
- - - - Flow 3 ingress (mean 32.98 Mbit/s)
——— Flow 3 egress (mean 31.93 Mbit/s)

- Flow 1 (95th percentile 145.38 ms)
- Flow 2 (95th percentile 148.52 ms)
- Flow 3 (95th percentile 149.62 ms)

```
Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 12:45:26
End at: 2019-05-30 12:45:56
Local clock offset: -3.002 ms
Remote clock offset: -5.449 ms


# Below is generated by plot.py at 2019-05-30 13:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.86 Mbit/s
95th percentile per-packet one-way delay: 156.280 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 61.74 Mbit/s
95th percentile per-packet one-way delay: 40.413 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 35.97 Mbit/s
95th percentile per-packet one-way delay: 193.566 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 24.61 Mbit/s
95th percentile per-packet one-way delay: 196.183 ms
Loss rate: 2.41%
```

Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 61.73 Mbit/s) Flow 1 egress (mean 61.74 Mbit/s)
Flow 2 ingress (mean 36.31 Mbit/s) Flow 2 egress (mean 35.97 Mbit/s)
Flow 3 ingress (mean 25.16 Mbit/s) Flow 3 egress (mean 24.61 Mbit/s)

Flow 1 (95th percentile 40.41 ms) Flow 2 (95th percentile 193.57 ms) Flow 3 (95th percentile 196.18 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 11:14:42
End at: 2019-05-30 11:15:12
Local clock offset: 2.151 ms
Remote clock offset: -0.774 ms


# Below is generated by plot.py at 2019-05-30 13:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 24.046 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 63.17 Mbit/s
95th percentile per-packet one-way delay: 24.156 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 34.96 Mbit/s
95th percentile per-packet one-way delay: 23.691 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 26.32 Mbit/s
95th percentile per-packet one-way delay: 24.345 ms
Loss rate: 0.27%
```
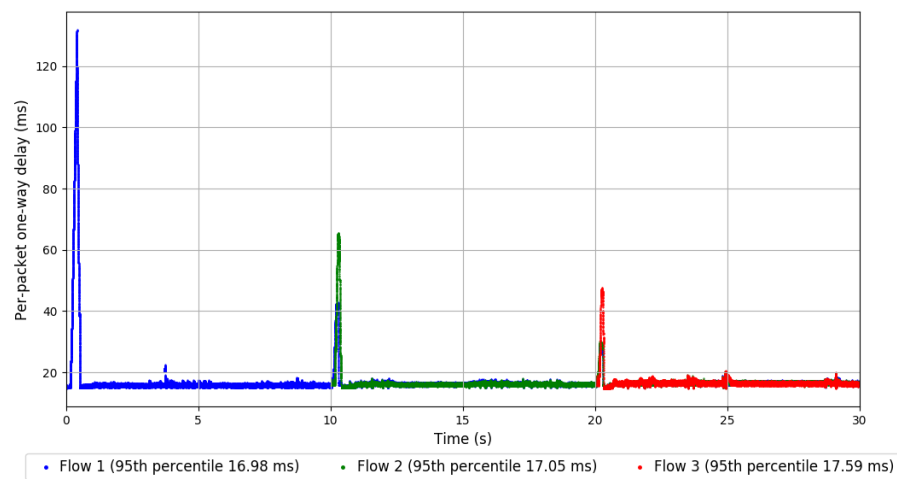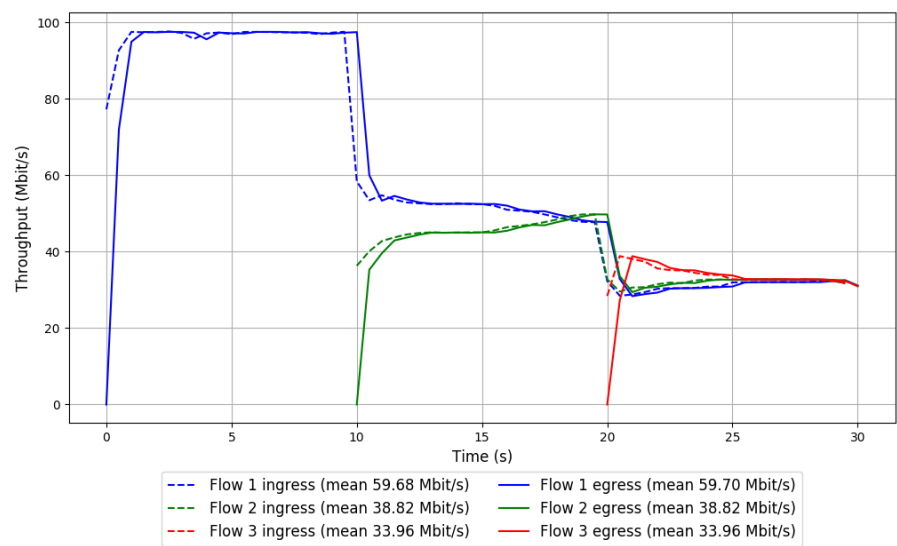
Run 1: Report of TCP Vegas — Data Link
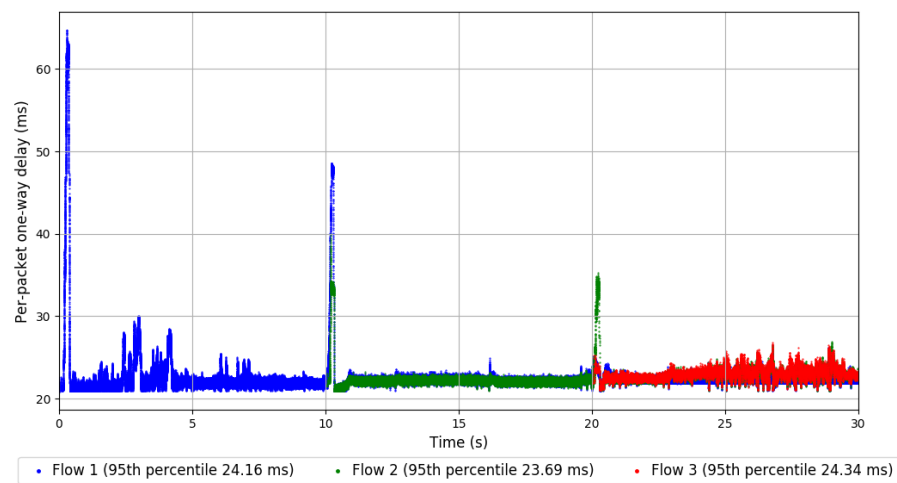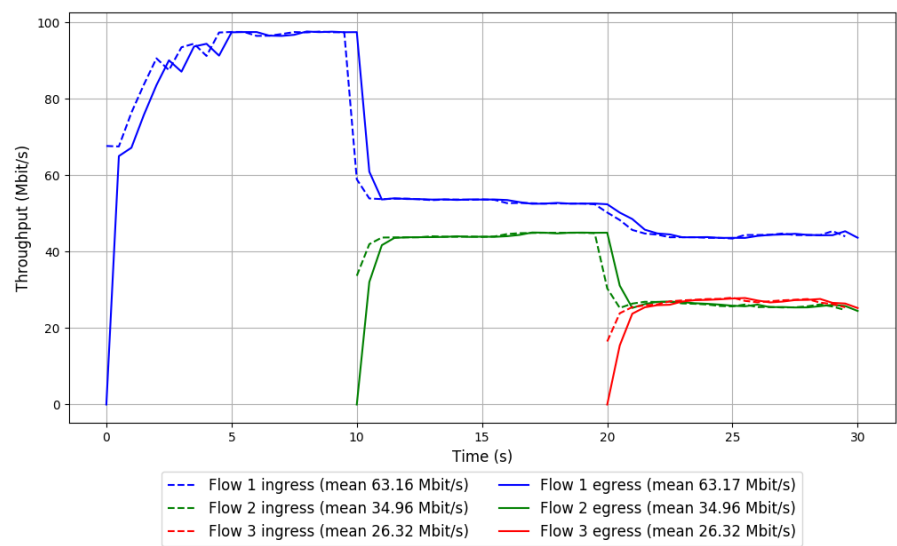
```
Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 11:42:07
End at: 2019-05-30 11:42:37
Local clock offset: -2.558 ms
Remote clock offset: -1.816 ms


# Below is generated by plot.py at 2019-05-30 13:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 17.829 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 17.880 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 17.756 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 33.60 Mbit/s
95th percentile per-packet one-way delay: 17.854 ms
Loss rate: 0.26%
```

Run 2: Report of TCP Vegas — Data Link
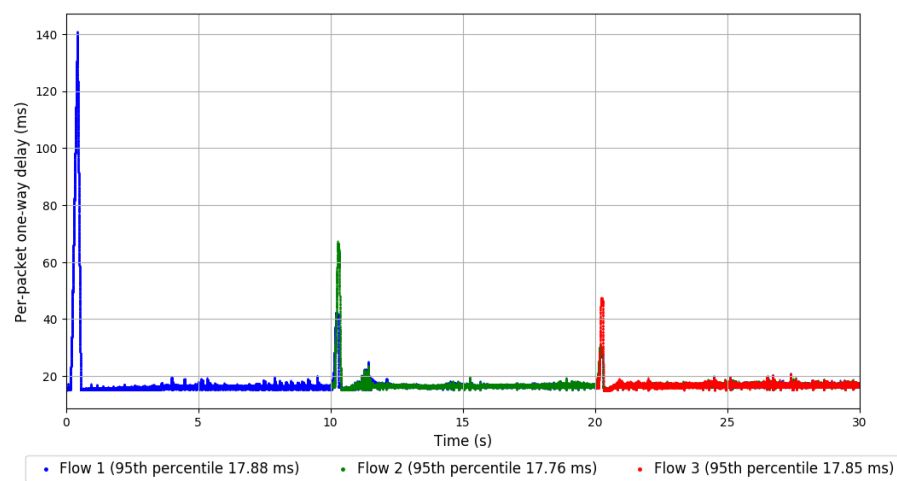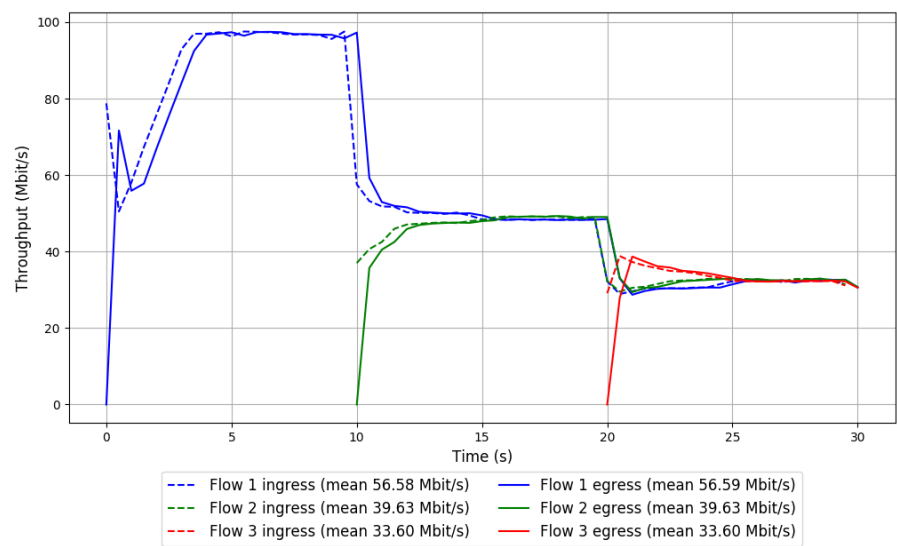
```
Run 3: Statistics of TCP Vegas

Start at: 2019-05-30 12:09:22
End at: 2019-05-30 12:09:52
Local clock offset: -1.134 ms
Remote clock offset: -2.857 ms


# Below is generated by plot.py at 2019-05-30 13:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.81 Mbit/s
95th percentile per-packet one-way delay: 17.112 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.70 Mbit/s
95th percentile per-packet one-way delay: 16.982 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 17.047 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 33.96 Mbit/s
95th percentile per-packet one-way delay: 17.591 ms
Loss rate: 0.27%
```

Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 59.68 Mbit/s) --- Flow 1 egress (mean 59.70 Mbit/s)
Flow 2 ingress (mean 38.82 Mbit/s) --- Flow 2 egress (mean 38.82 Mbit/s)
Flow 3 ingress (mean 33.96 Mbit/s) --- Flow 3 egress (mean 33.96 Mbit/s)

Flow 1 (95th percentile 16.98 ms)   Flow 2 (95th percentile 17.05 ms)   Flow 3 (95th percentile 17.59 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 12:36:14
End at: 2019-05-30 12:36:44
Local clock offset: 3.363 ms
Remote clock offset: -6.134 ms


# Below is generated by plot.py at 2019-05-30 13:24:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.09 Mbit/s
95th percentile per-packet one-way delay: 24.321 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 60.98 Mbit/s
95th percentile per-packet one-way delay: 23.519 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 34.66 Mbit/s
95th percentile per-packet one-way delay: 24.073 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 30.24 Mbit/s
95th percentile per-packet one-way delay: 25.639 ms
Loss rate: 0.27%
```

Run 4: Report of TCP Vegas — Data Link
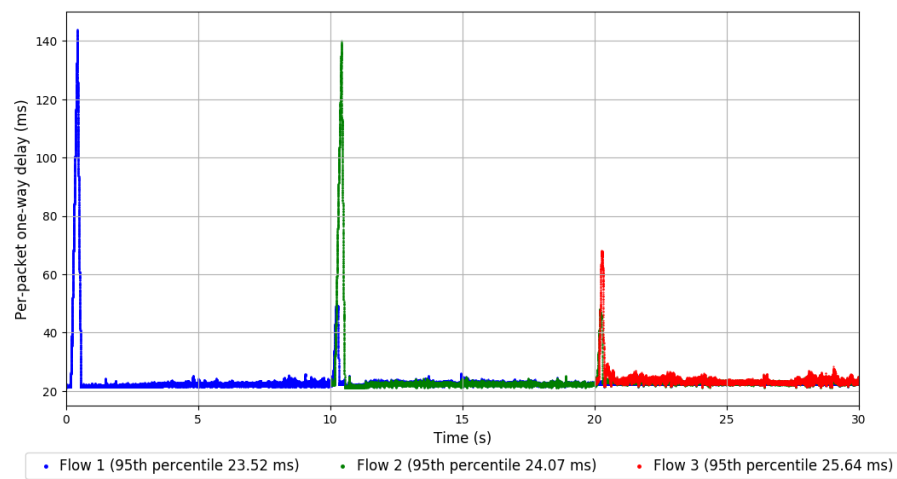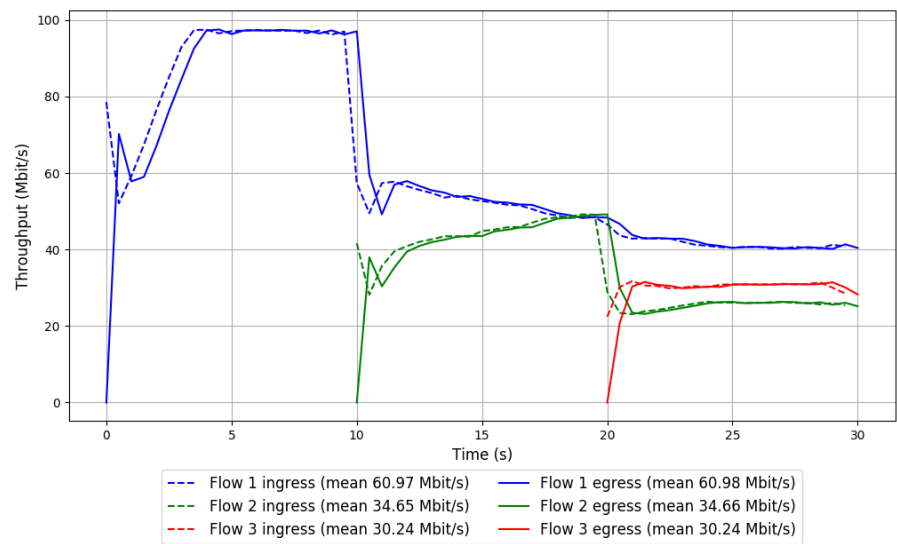
```
Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 13:03:57
End at: 2019-05-30 13:04:27
Local clock offset: -4.101 ms
Remote clock offset: -5.195 ms


# Below is generated by plot.py at 2019-05-30 13:24:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 19.470 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 55.27 Mbit/s
95th percentile per-packet one-way delay: 19.757 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 17.038 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 20.327 ms
Loss rate: 0.26%
```

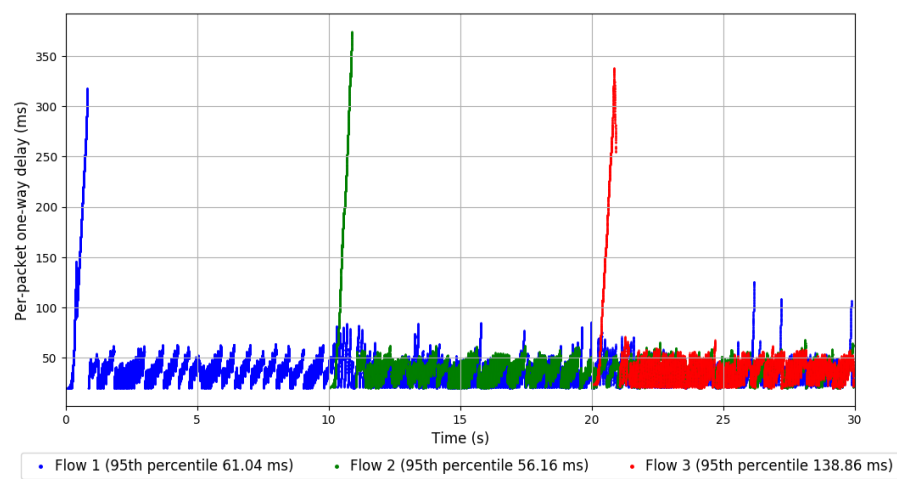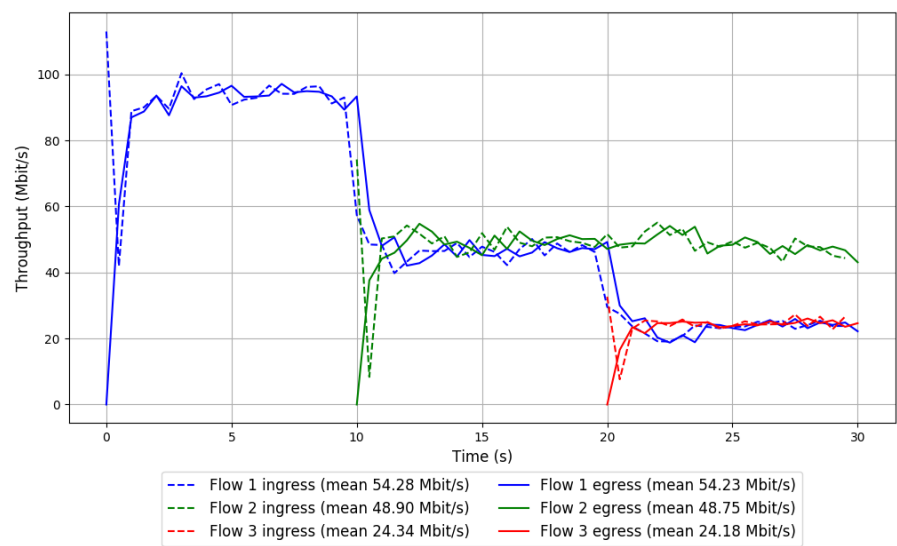## Run 5: Report of TCP Vegas — Data Link
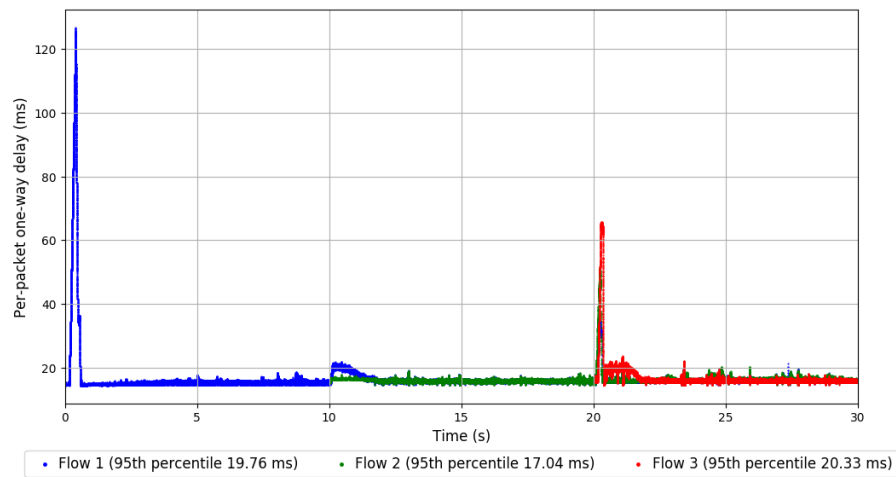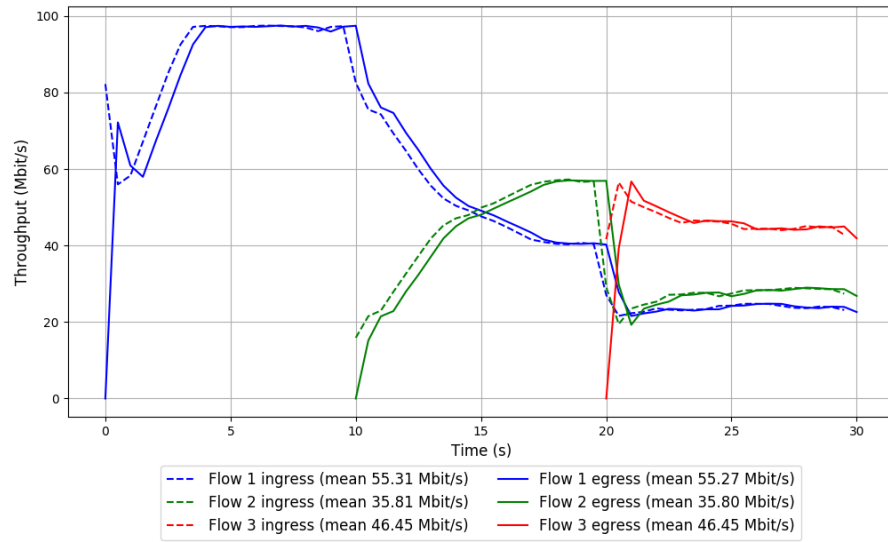
```
Run 1: Statistics of Verus

Start at: 2019-05-30 11:09:11
End at: 2019-05-30 11:09:41
Local clock offset: 2.562 ms
Remote clock offset: 0.721 ms


# Below is generated by plot.py at 2019-05-30 13:25:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.38 Mbit/s
95th percentile per-packet one-way delay: 69.709 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 61.95 Mbit/s
95th percentile per-packet one-way delay: 69.082 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 68.106 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 25.94 Mbit/s
95th percentile per-packet one-way delay: 135.071 ms
Loss rate: 0.69%
```
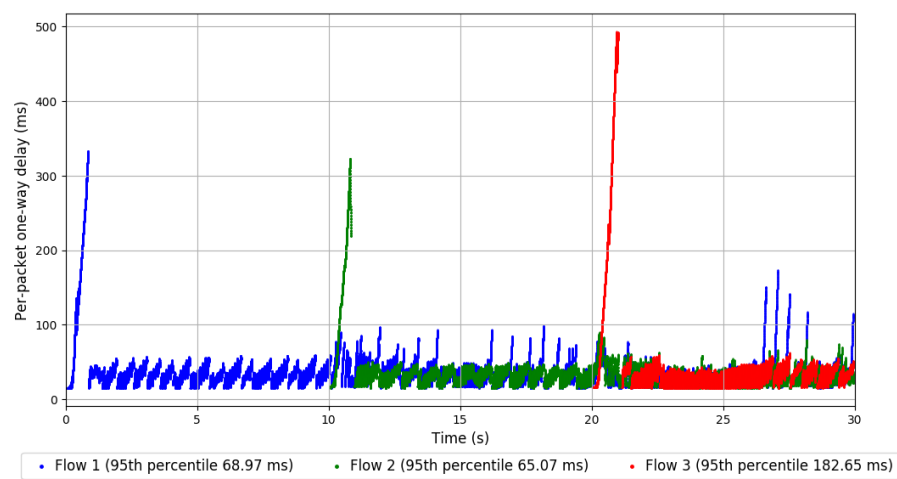
Run 1: Report of Verus — Data Link
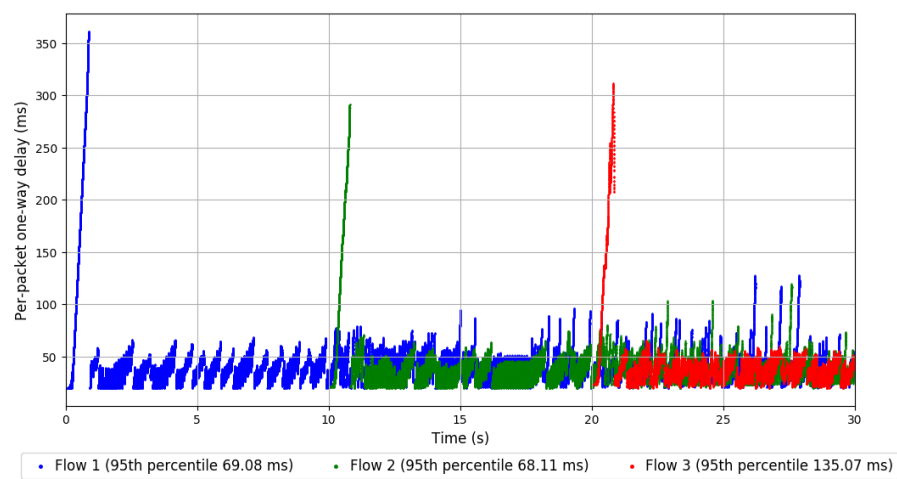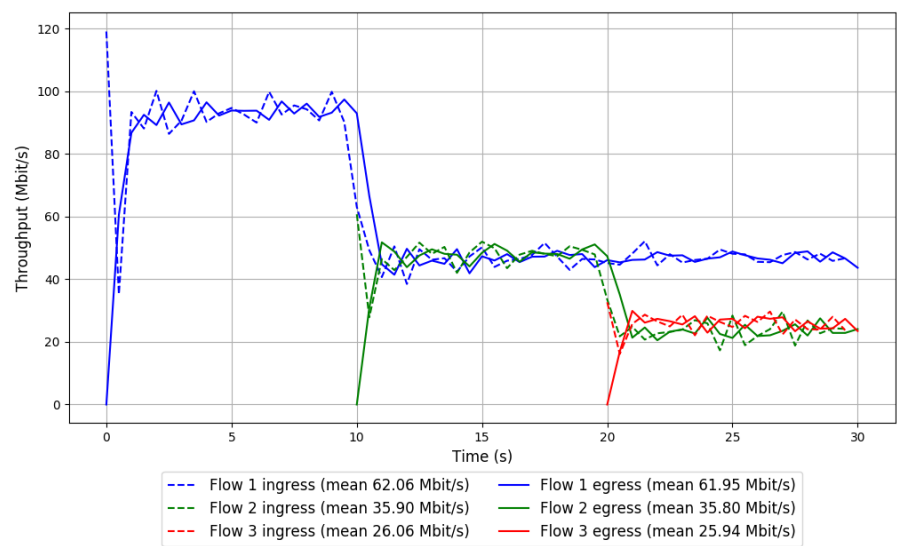
```
Run 2: Statistics of Verus

Start at: 2019-05-30 11:36:48
End at: 2019-05-30 11:37:18
Local clock offset: 0.515 ms
Remote clock offset: -2.231 ms


# Below is generated by plot.py at 2019-05-30 13:25:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 60.254 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 54.23 Mbit/s
95th percentile per-packet one-way delay: 61.036 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 48.75 Mbit/s
95th percentile per-packet one-way delay: 56.158 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 24.18 Mbit/s
95th percentile per-packet one-way delay: 138.862 ms
Loss rate: 0.91%
```
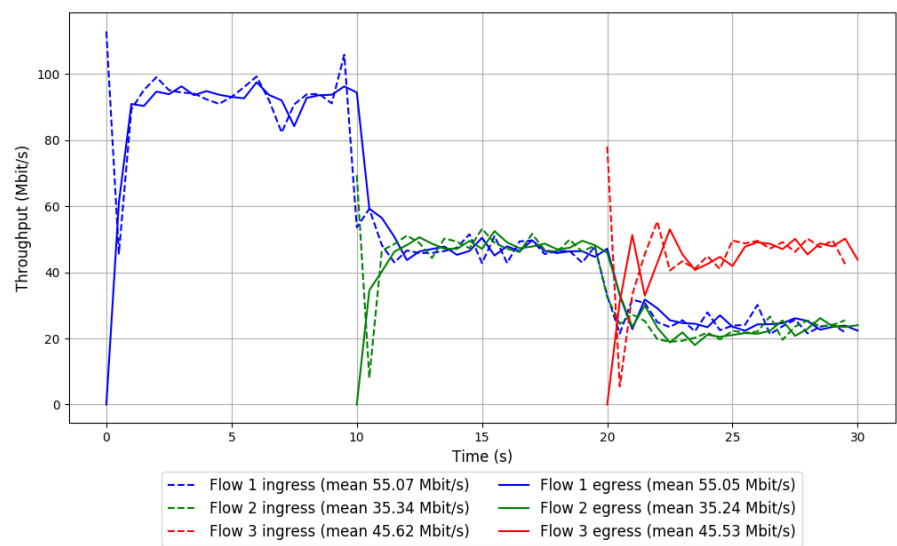
Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 54.28 Mbit/s) --- Flow 1 egress (mean 54.23 Mbit/s)
Flow 2 ingress (mean 48.90 Mbit/s) --- Flow 2 egress (mean 48.75 Mbit/s)
Flow 3 ingress (mean 24.34 Mbit/s) --- Flow 3 egress (mean 24.18 Mbit/s)

Flow 1 (95th percentile 61.04 ms) · Flow 2 (95th percentile 56.16 ms) · Flow 3 (95th percentile 138.86 ms)
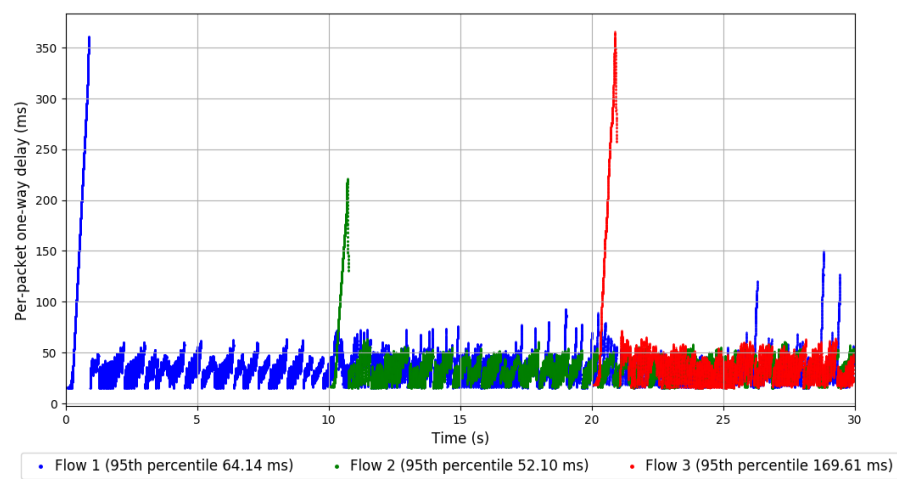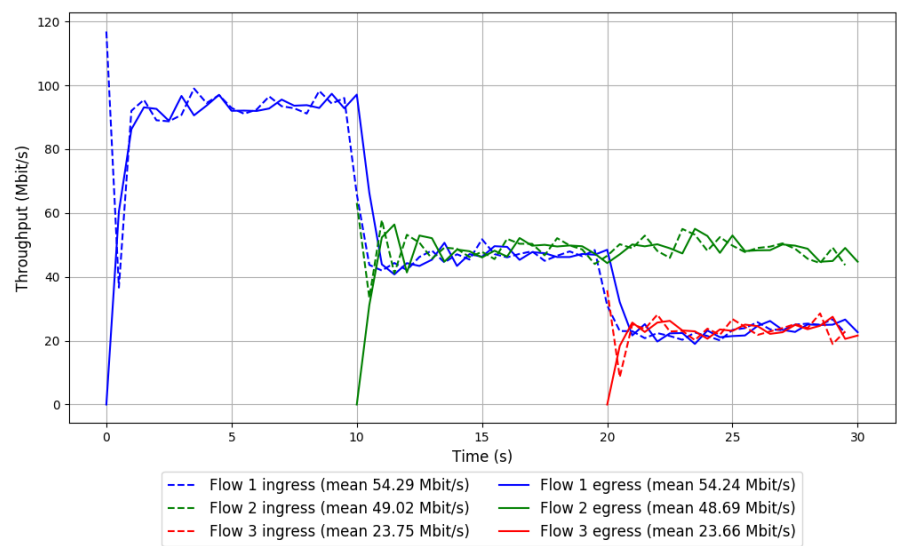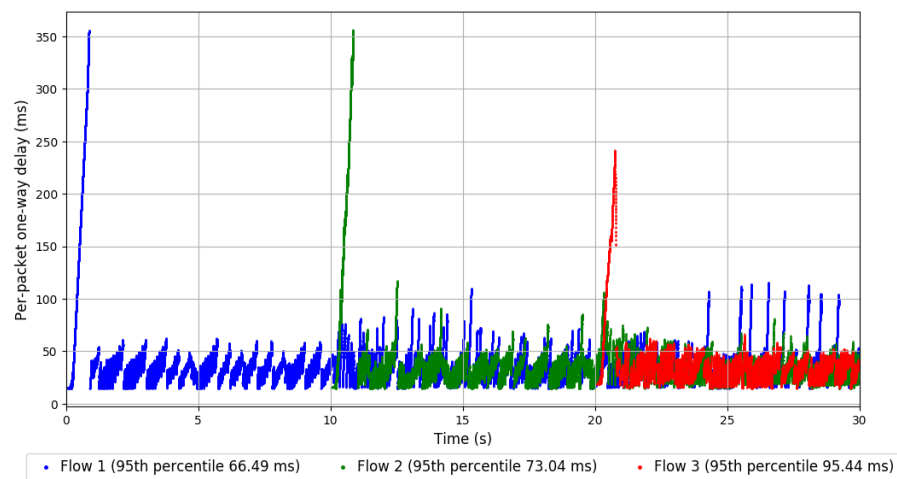
```
Run 3: Statistics of Verus

Start at: 2019-05-30 12:04:08
End at: 2019-05-30 12:04:38
Local clock offset: -0.562 ms
Remote clock offset: -2.352 ms


# Below is generated by plot.py at 2019-05-30 13:25:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 73.372 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 55.05 Mbit/s
95th percentile per-packet one-way delay: 68.969 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.24 Mbit/s
95th percentile per-packet one-way delay: 65.071 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 45.53 Mbit/s
95th percentile per-packet one-way delay: 182.645 ms
Loss rate: 0.43%
```

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 55.07 Mbit/s) — Flow 1 egress (mean 55.05 Mbit/s)
Flow 2 ingress (mean 35.34 Mbit/s) — Flow 2 egress (mean 35.24 Mbit/s)
Flow 3 ingress (mean 45.62 Mbit/s) — Flow 3 egress (mean 45.53 Mbit/s)

Flow 1 (95th percentile 68.97 ms) • Flow 2 (95th percentile 65.07 ms) • Flow 3 (95th percentile 182.65 ms)
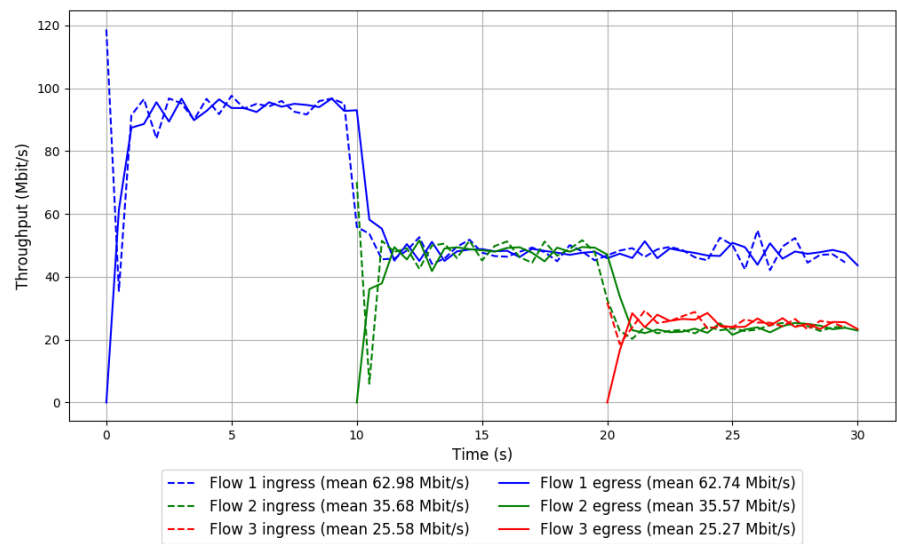
```
Run 4: Statistics of Verus

Start at: 2019-05-30 12:30:43
End at: 2019-05-30 12:31:13
Local clock offset: -1.57 ms
Remote clock offset: -4.725 ms


# Below is generated by plot.py at 2019-05-30 13:25:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 59.606 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 54.24 Mbit/s
95th percentile per-packet one-way delay: 64.144 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 48.69 Mbit/s
95th percentile per-packet one-way delay: 52.099 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 23.66 Mbit/s
95th percentile per-packet one-way delay: 169.606 ms
Loss rate: 0.66%
```
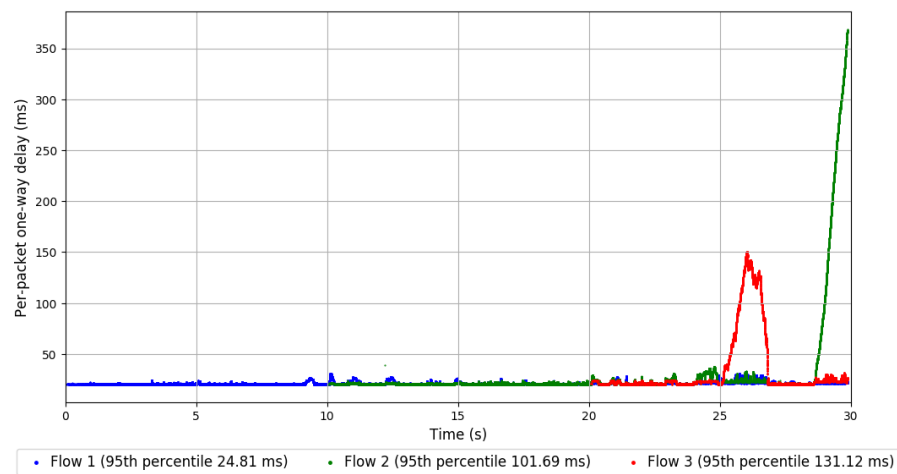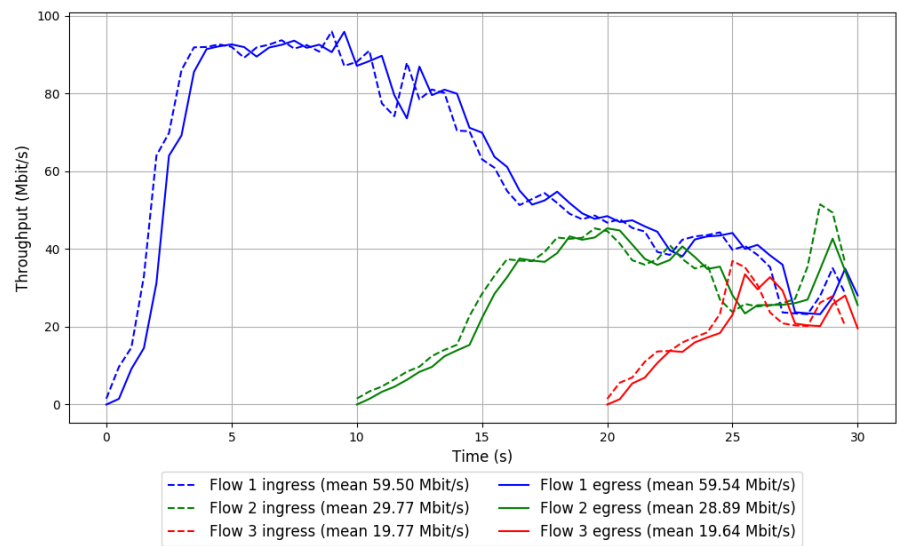
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-05-30 12:58:23
End at: 2019-05-30 12:58:53
Local clock offset: -3.297 ms
Remote clock offset: -5.639 ms


# Below is generated by plot.py at 2019-05-30 13:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 68.741 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 66.486 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 73.038 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 25.27 Mbit/s
95th percentile per-packet one-way delay: 95.445 ms
Loss rate: 1.45%
```

Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 11:16:04
End at: 2019-05-30 11:16:34
Local clock offset: 2.126 ms
Remote clock offset: -0.128 ms


# Below is generated by plot.py at 2019-05-30 13:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.22 Mbit/s
95th percentile per-packet one-way delay: 29.072 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 59.54 Mbit/s
95th percentile per-packet one-way delay: 24.814 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 28.89 Mbit/s
95th percentile per-packet one-way delay: 101.690 ms
Loss rate: 3.10%
-- Flow 3:
Average throughput: 19.64 Mbit/s
95th percentile per-packet one-way delay: 131.120 ms
Loss rate: 0.90%
```

Run 1: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 59.50 Mbit/s)   —— Flow 1 egress (mean 59.54 Mbit/s)
- - - - Flow 2 ingress (mean 29.77 Mbit/s)   —— Flow 2 egress (mean 28.89 Mbit/s)
- - - - Flow 3 ingress (mean 19.77 Mbit/s)   —— Flow 3 egress (mean 19.64 Mbit/s)

• Flow 1 (95th percentile 24.81 ms)   • Flow 2 (95th percentile 101.69 ms)   • Flow 3 (95th percentile 131.12 ms)
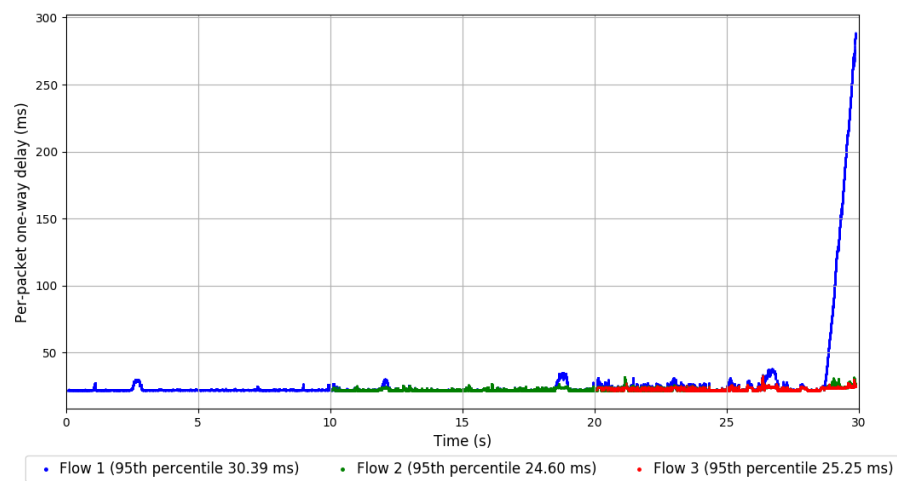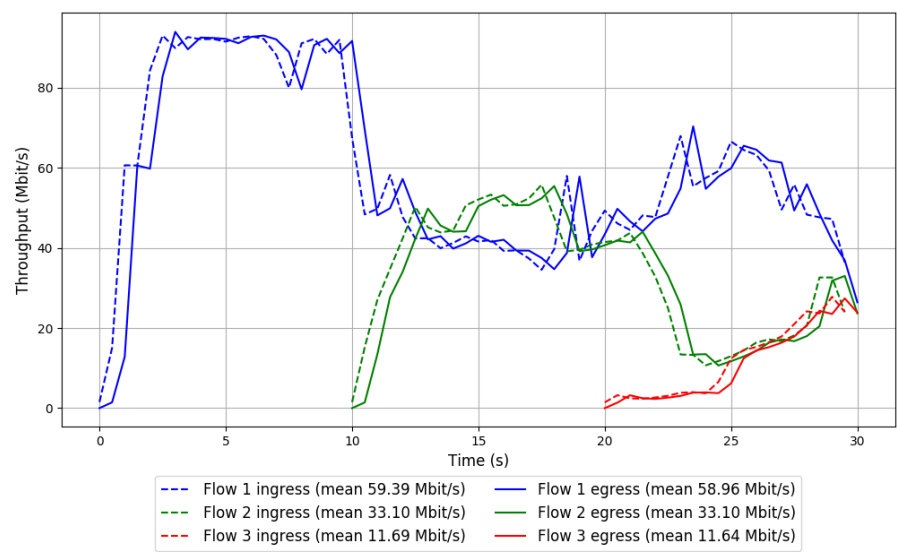
```
Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 11:43:26
End at: 2019-05-30 11:43:56
Local clock offset: 3.229 ms
Remote clock offset: -2.027 ms


# Below is generated by plot.py at 2019-05-30 13:25:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 83.794 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 54.23 Mbit/s
95th percentile per-packet one-way delay: 65.499 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 37.02 Mbit/s
95th percentile per-packet one-way delay: 238.556 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 20.57 Mbit/s
95th percentile per-packet one-way delay: 52.996 ms
Loss rate: 0.25%
```

Run 2: Report of PCC-Vivace — Data Link
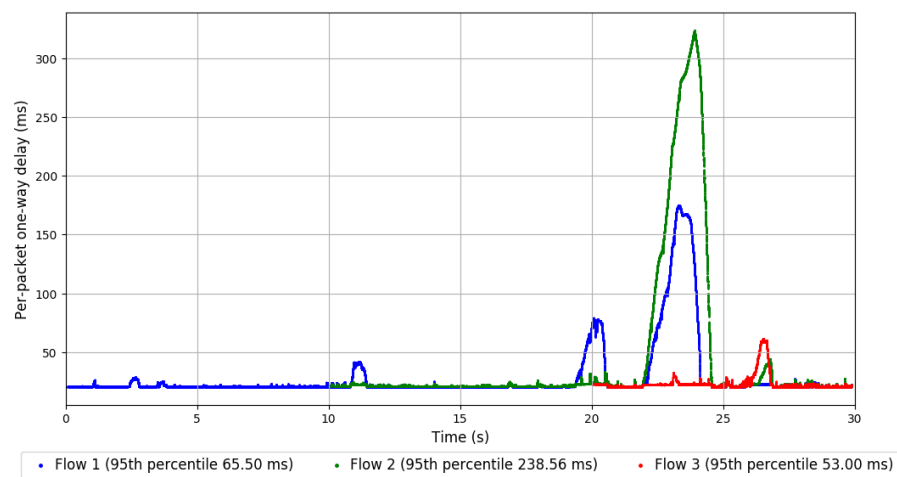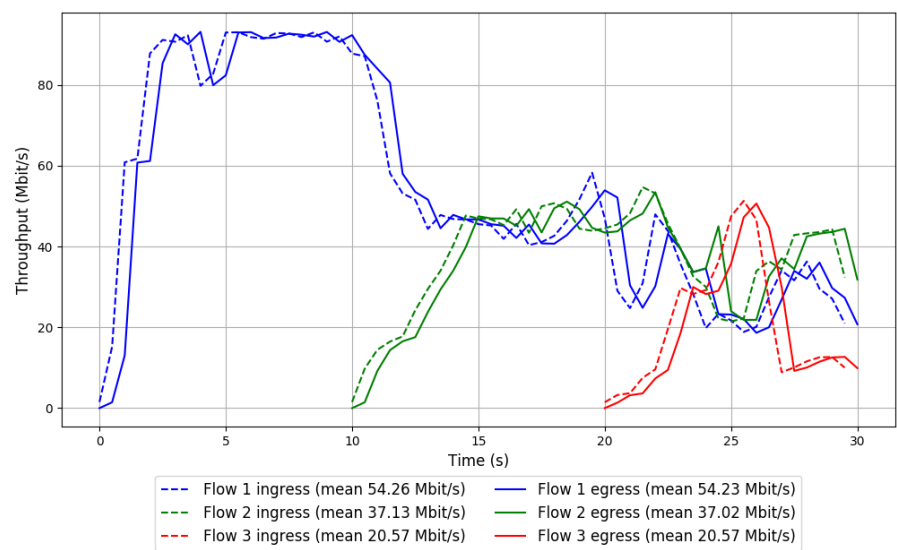
```
Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 12:10:36
End at: 2019-05-30 12:11:06
Local clock offset: 4.035 ms
Remote clock offset: -4.655 ms


# Below is generated by plot.py at 2019-05-30 13:25:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 28.554 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 58.96 Mbit/s
95th percentile per-packet one-way delay: 30.389 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 33.10 Mbit/s
95th percentile per-packet one-way delay: 24.599 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 25.253 ms
Loss rate: 0.73%
```

Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 12:37:43
End at: 2019-05-30 12:38:13
Local clock offset: 3.869 ms
Remote clock offset: -5.517 ms


# Below is generated by plot.py at 2019-05-30 13:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.39 Mbit/s
95th percentile per-packet one-way delay: 29.009 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 59.72 Mbit/s
95th percentile per-packet one-way delay: 28.584 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 33.04 Mbit/s
95th percentile per-packet one-way delay: 36.171 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 17.29 Mbit/s
95th percentile per-packet one-way delay: 22.936 ms
Loss rate: 0.40%
```

Run 4: Report of PCC-Vivace — Data Link
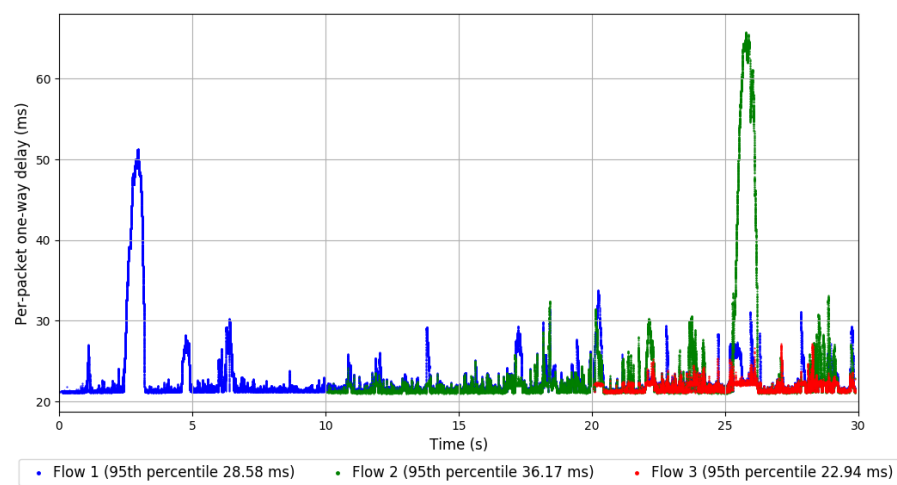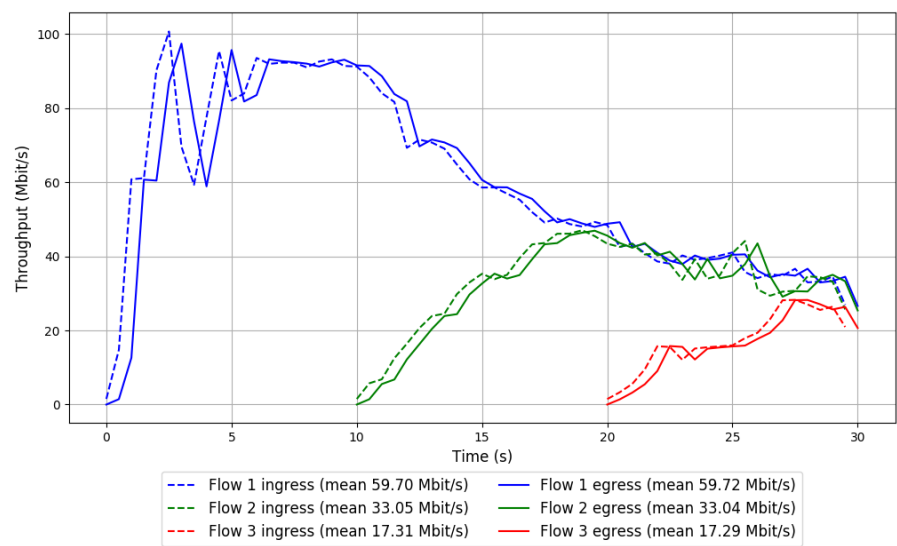
```
Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 13:05:15
End at: 2019-05-30 13:05:45
Local clock offset: 2.365 ms
Remote clock offset: -5.703 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.09 Mbit/s
95th percentile per-packet one-way delay: 1762.750 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 57.10 Mbit/s
95th percentile per-packet one-way delay: 1811.846 ms
Loss rate: 5.56%
-- Flow 2:
Average throughput: 34.77 Mbit/s
95th percentile per-packet one-way delay: 31.395 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 26.83 Mbit/s
95th percentile per-packet one-way delay: 106.493 ms
Loss rate: 0.60%
```

Run 5: Report of PCC-Vivace — Data Link
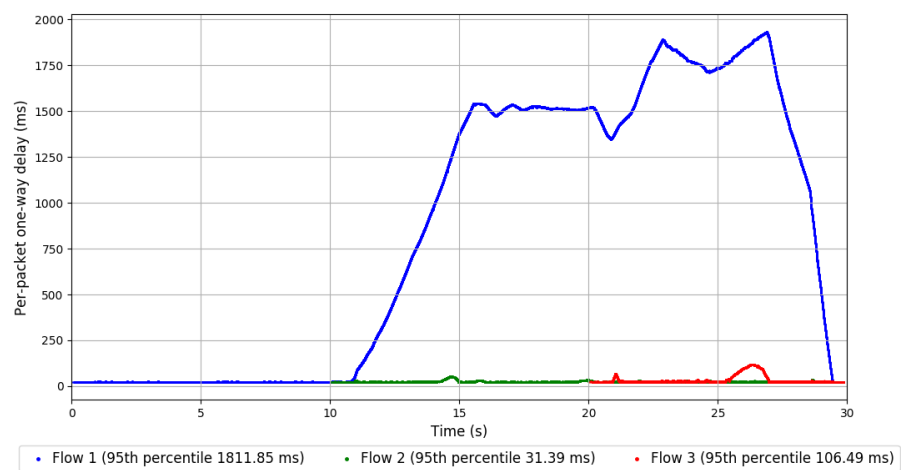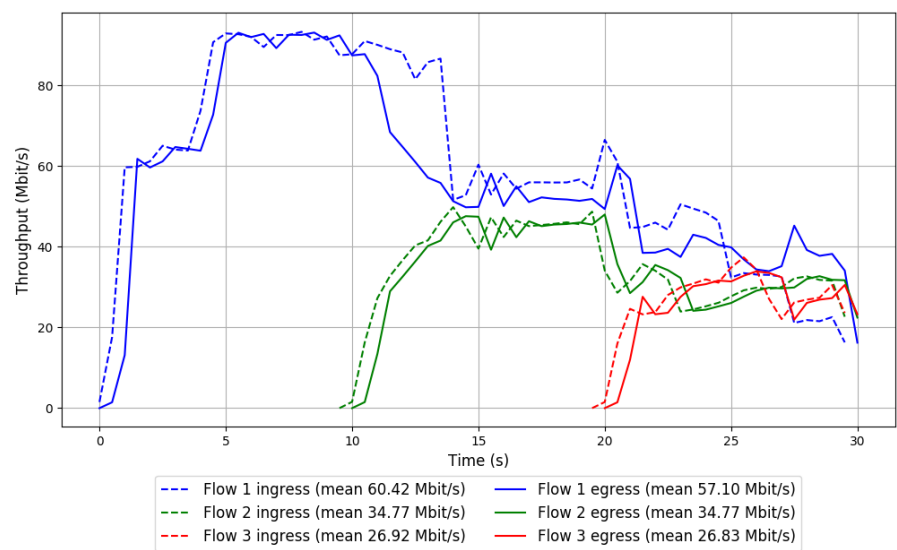
```
Run 1: Statistics of WebRTC media

Start at: 2019-05-30 11:01:41
End at: 2019-05-30 11:02:11
Local clock offset: -1.62 ms
Remote clock offset: 1.304 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 15.626 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 15.554 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 15.635 ms
Loss rate: 2.54%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 15.766 ms
Loss rate: 4.52%
```
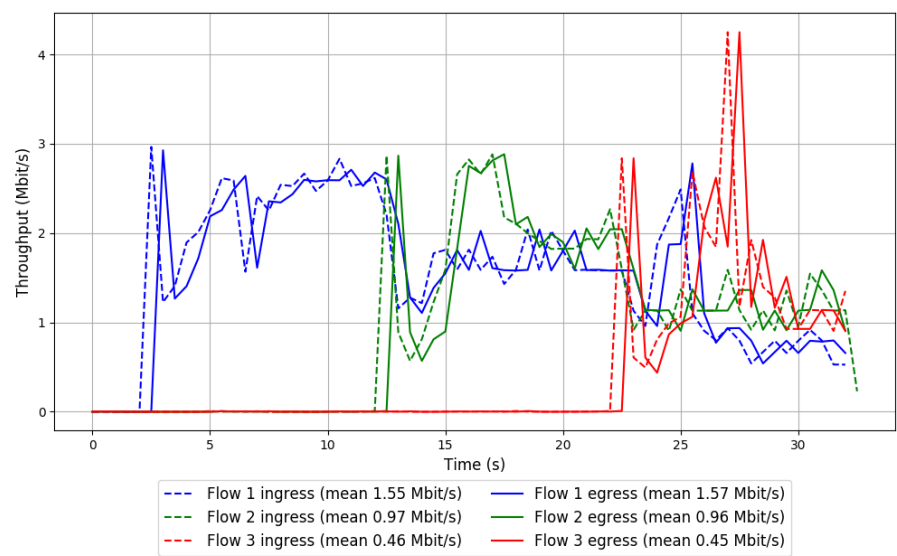
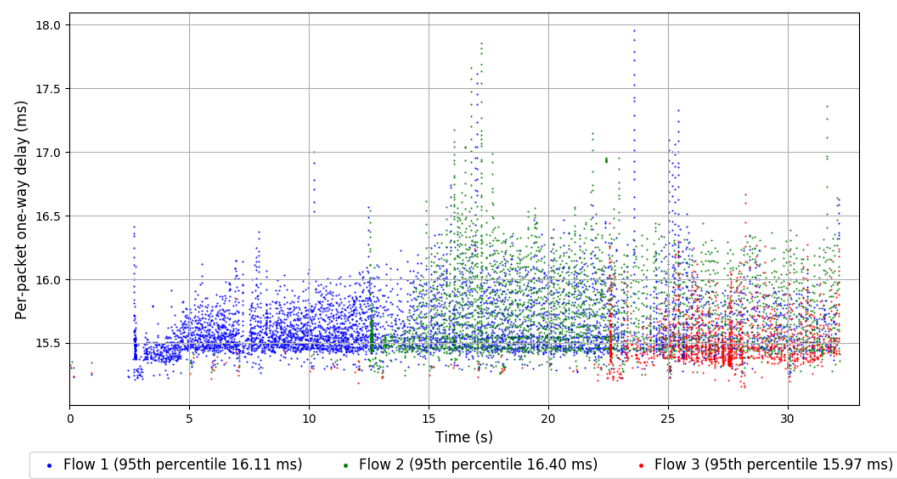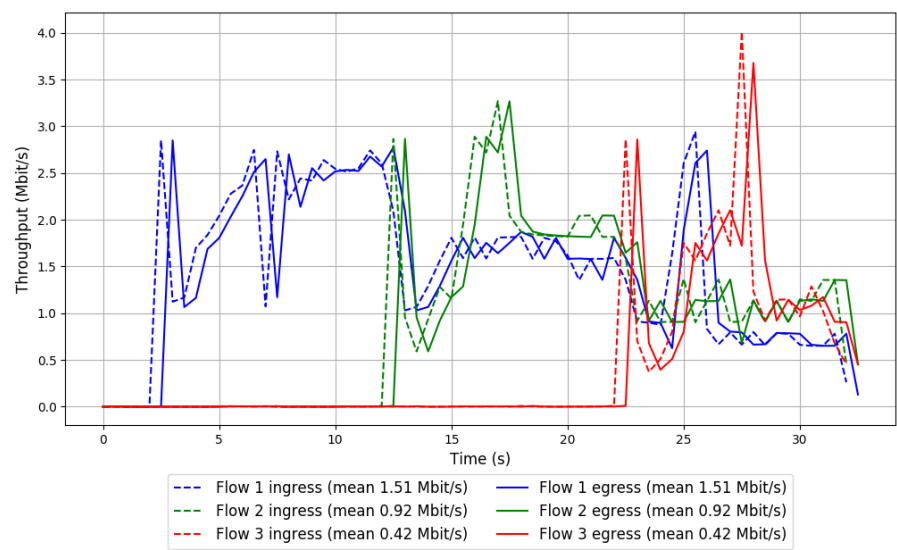Run 1: Report of WebRTC media — Data Link
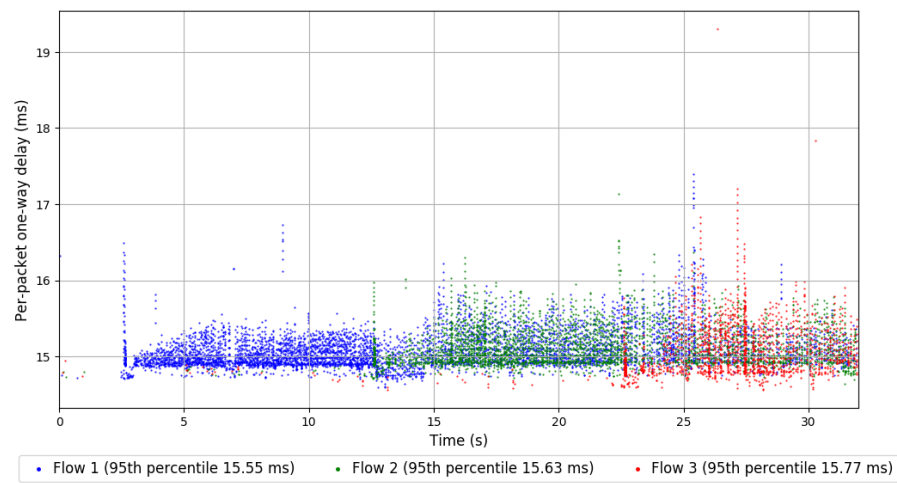
```
Run 2: Statistics of WebRTC media

Start at: 2019-05-30 11:29:00
End at: 2019-05-30 11:29:30
Local clock offset: -2.59 ms
Remote clock offset: -0.351 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 16.241 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 16.112 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 16.404 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 15.966 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-05-30 11:56:39
End at: 2019-05-30 11:57:09
Local clock offset: -0.488 ms
Remote clock offset: -4.01 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 18.331 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 18.317 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 18.268 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 18.546 ms
Loss rate: 0.00%
```
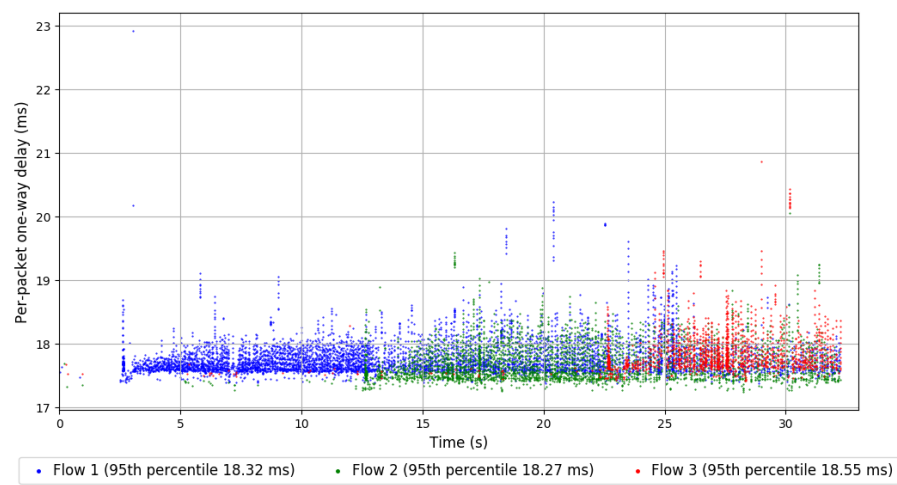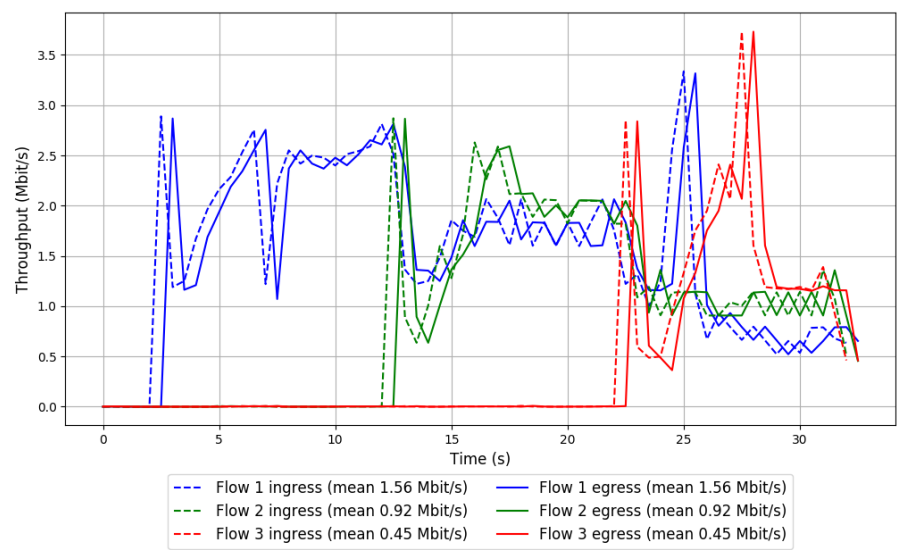
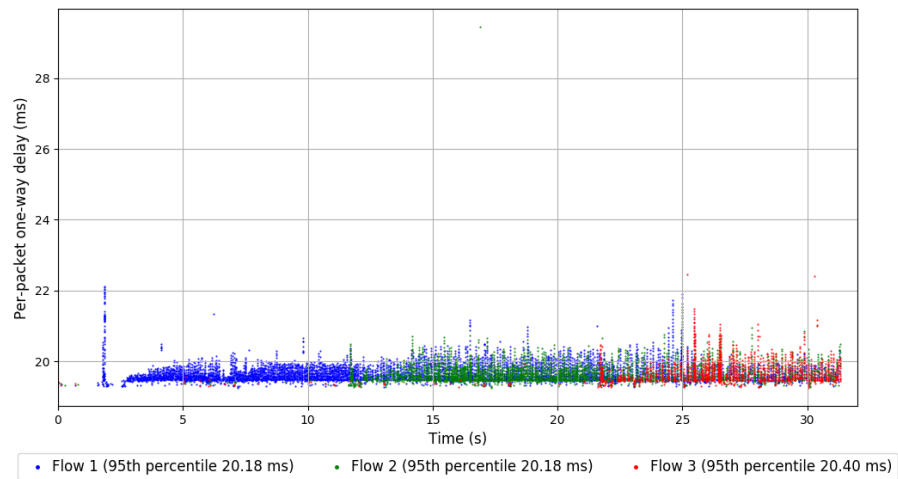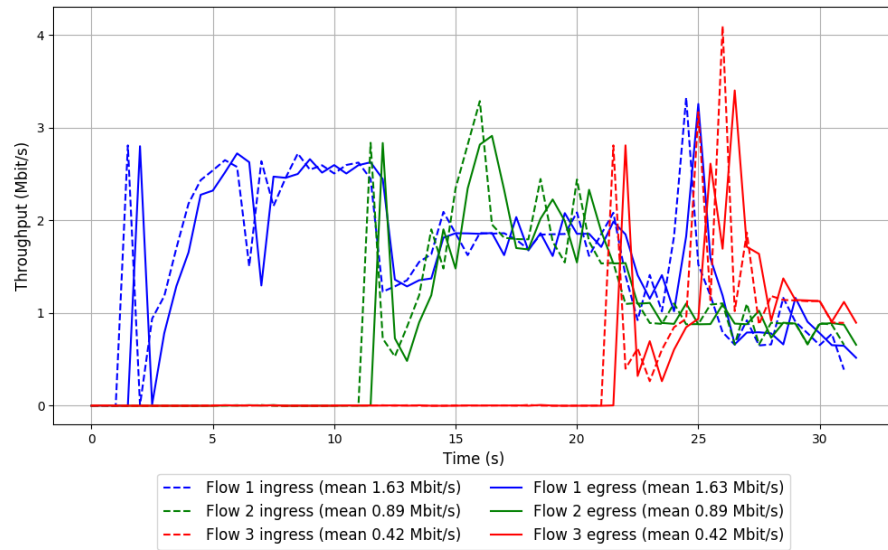Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-05-30 12:23:13
End at: 2019-05-30 12:23:43
Local clock offset: 2.459 ms
Remote clock offset: -4.368 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 20.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 20.184 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 20.181 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 20.402 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-05-30 12:50:45
End at: 2019-05-30 12:51:15
Local clock offset: -2.597 ms
Remote clock offset: -7.138 ms


# Below is generated by plot.py at 2019-05-30 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 18.579 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 17.717 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 17.859 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 19.952 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link